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Environmental Impact Report

Comments and Responses
Volume 5

San Francisco Public Utilities Commission

CALAVERAS DAM REPLACEMENT PROJECT

San Francisco Planning Department File No. 2005.0161E
State Clearinghouse No. 2005102102

Draft EIR Publication Date: October 6, 2009
Draft EIR Public Hearing Date:
November 10, 2009 in Fremont, CA
November 12, 2009 in San Francisco, CA
December 14, 2009 in Sunol, CA
Draft EIR Public Comment Period: October 6, 2009 through December 21, 2009
Comments and Responses Publication Date: January 5, 2011
Final EIR Certification Date: January 27, 2011

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San Francisco Planning Department

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CALAVERAS DAM REPLACEMENT PROJECT
ENVIRONMENTAL IMPACT REPORT – COMMENTS AND RESPONSES

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11.2 ORGANIZATIONS

Listed below are the organizations that submitted comments on the *Calaveras Dam Replacement Project Draft EIR*, along with the order of the responses in this subsection, the commenter code for each organization, and the page number on which each set of responses begins.

Response Order	Code	Commenter	Comment Format and Date	Beginning Page Number of Responses
11.2.1	O-ACA1	Alameda Creek Alliance Jeff Miller	Public hearing comments, Fremont Main Library, November 10, 2009, pages 26-29	11.2.1-1
11.2.2	O-ACA2	Alameda Creek Alliance Jeff Miller	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 37-39	11.2.2-1
11.2.3	O-ACA3	Alameda Creek Alliance Jeff Miller	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 36-38	11.2.3-1
11.2.4	O-ACA&CBD1	Alameda Creek Alliance Jeff Miller, Director The Center for Biological Diversity Peter Galvin, Conservation Director	Letter, December 18, 2009	11.2.4-1
11.2.5	O-ACA&CBD2	Lippe Gaffney Wagner LLP, representing the Alameda Creek Alliance and the Center for Biological Diversity Brian Gaffney	Letter, December 21, 2009	11.2.5-1
11.2.6	O-Acterra et al.	46 Bay Area conservation organizations	Letter, December 14, 2009	11.2.6-1
11.2.7	O-AFS-1	American Fisheries Society, California-Nevada Chapter Michelle Workman, President	Letter, December 18, 2009	11.2.7-1
11.2.8	O-AudOh1	Ohlone Audubon Society, Inc. Evelyn M. Cormier, President	Letter, December 5, 2009	11.2.8-1
11.2.9	O-AudOh2	Ohlone Audubon Society, Inc. Rich Cimino	Letter, November 10, 2009	11.2.9-1

Response Order	Code	Commenter	Comment Format and Date	Beginning Page Number of Responses
11.2.10	O-BAC	The Bay Area Council George Broder	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 29-30	11.2.10-1
11.2.11	O-CL22	Carpenters Local 22 Manny Florez	Public hearing comments, San Francisco City Hall, November 12, 2009, page 40	11.2.11-1
11.2.12	O-CL713	Weinberg, Roger & Rosenfeld, representing Carpenters Union Local 713 Richard Drury	Letter, December 21, 2009	11.2.12-1
11.2.13	O-CNPS1	California Native Plant Society, Santa Clara Valley Chapter Kevin Bryant	Email, December 21, 2009	11.2.13-1
11.2.14	O-CNPS2	California Native Plant Society, East Bay and Santa Clara Valley Chapters Lech Naumovich and Libby Lucas	Letter, December 21, 2009	11.2.14-1
11.2.15	O-CWA	Clean Water Action Jennifer Clary	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 40-41	11.2.15-1
11.2.16	O-EBBC	East Bay Bicycle Coalition Robert Raburn, Executive Director	Public hearing comments, Fremont Main Library, November 10, 2009, pages 31-33	11.2.16-1
11.2.17	O-FFBC1	Fremont Freewheelers Bicycle Club Jan Green, the Primavera Organizing Committee	Letter, December 11, 2009	11.2.17-1
11.2.18	O-FFBC2	Fremont Freewheelers Bicycle Club Gary Smith and Jan Green	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 32-33	11.2.18-1

Response Order	Code	Commenter	Comment Format and Date	Beginning Page Number of Responses
11.2.19	O-FFBC3	Fremont Freewheelers Bicycle Club Jan Green	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, page 33	11.2.19-1
11.2.20	O-GPFF	Grizzly Peak Fly Fishers Jim Schrrer, Conservation Chair	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, page 35	11.2.20-1
11.2.21	O-GWWF1	Golden West Women Flyfishers Cindy Charles, President and Conservation Chair	Letter, November 11, 2009	11.2.21-1
11.2.22	O-GWWF2	Golden West Women Flyfishers Cindy Charles, President and Conservation Chair	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 21-23	11.2.22-1
11.2.23	O-LVWBA	League of Women Voters of the Bay Area Marion Taylor, Vice President, Program and Advocacy	Letter, November 18, 2009	11.2.23-1
11.2.24	O-NCCFFF1	Northern California Council of Federation of Fly Fishers Anne-Marie Bakker, President	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, page 32	11.2.24-1
11.2.25	O-NCCFFF2	Northern California Council of Federation of Fly Fishers Bobbie Armor, Director and Conservation Peninsula Fly Fishers	Letter, December 14, 2009	11.2.25-1
11.2.26	O-NCDCL	Northern California District Council of Laborers Anthony Dimas	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 28-29	11.2.26-1

Response Order	Code	Commenter	Comment Format and Date	Beginning Page Number of Responses
11.2.27	O-OpEng1	Operating Engineers Local 3 Ken Edgecombe, Business Representative	Public hearing comments, Fremont Main Library, November 10, 2009, pages 18-19	11.2.27-1
11.2.28	O-OpEng2	Operating Engineers Union Charlie Lavery	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 21-22	11.2.28-1
11.2.29	O-OpEng3	Operating Engineers Local 3 Mike Croll, Business Representative	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 28-29	11.2.29-1
11.2.30	O-SFBCTC	San Francisco Building and Construction Trades Council Michael Theriault	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 25-26	11.2.30-1
11.2.31	O-SFBOMA1	San Francisco Building Owners and Managers Association Ken Cleaveland, Director, Government and Public Affairs	Letter, November 12, 2009	11.2.31-1
11.2.32	O-SFBOMA2	San Francisco Building Owners and Managers Association Ken Cleaveland, Director, Government and Public Affairs	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 24-25	11.2.32-1
11.2.33	O-SFCofC	San Francisco Chamber of Commerce Rob Black, Vice President/Public Policy	Letter, November 12, 2009	11.2.33-1
11.2.34	O-SierraC	Sierra Club, San Francisco Bay Chapter Janis Turner	Letter, December 14, 2009	11.2.34-1
11.2.35	O-TRT1	Tuolumne River Trust Jessie Raeder	Public hearing comments, Fremont Main Library, November 10, 2009, pages 29-31	11.2.35-1

Response Order	Code	Commenter	Comment Format and Date	Beginning Page Number of Responses
11.2.36	O-TRT2	Tuolumne River Trust, Bay Area Water Stewards, Salmon Aid Foundation Jessie Raeder	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 18-20	11.2.36-1
11.2.37	O-TRT3	Tuolumne River Trust, Bay Area Water Stewards, Salmon Egg Coalition Jessie Raeder	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 29-31	11.2.37-1

11.2.1 ALAMEDA CREEK ALLIANCE, JEFF MILLER, 11/10/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-ACA1-01 The comment asserts that flows for steelhead trout, while an improvement from the SFPUC's Water System Improvement Program (WSIP) PEIR, are inadequate. The comment further states that proposed summer flows seem to be adequate and preconstruction surveys, exclusion measures, and avoidance measures during construction seem to be sufficient.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, regarding flow schedules included in project implementation and effects on fisheries, including steelhead. .

As indicated in the analysis of cumulative fisheries impacts in the EIR (Vol. 2, Chapter 6, pages 6-23 – 6-32), implementation of the CDRP as described in the EIR would not result in significant adverse effects to steelhead trout. As discussed in Chapter 9 of this Comments and Responses document, since publication of the Draft EIR, the SFPUC has developed and adopted a variant to the project analyzed in the EIR. This CDRP Variant, which is SFPUC's preferred project, includes enhancements for native fishes and other aquatic species that have been developed, in part, as a result of the SFPUC's ongoing coordination with resource agencies. The CDRP Variant includes revised flow schedules, construction of a fish ladder at the Alameda Creek Diversion Dam (ACDD), installation of fish screens at the ACDD and Calaveras Reservoir, and implementation of an adaptive management implementation plan (AMIP). Information on the adequacy of flows for steelhead under the Draft EIR project as well as the CDRP Variant is provided in the master response sections listed above.

O-ACA1-02 The comment, which finds that the engineering planning for soil movement is very thorough, is acknowledged. No further response is required.

O-ACA1-03 The comment states that the description of post-construction operation of the dam and post-construction effects below the dam is lacking. The commenter also states the opinion that the SFPUC has proposed the minimum in response to regulatory requirements.

The comment's request for more description of post-construction operation of the dam is a general statement, and it is difficult to provide a specific response. The description of post-construction operation of the dam, as described on pages 3-63 – 3-70 of the EIR (Vol. 1, Chapter 3, Section 3.6), fulfills the requirements of CEQA and is sufficient to support the analysis of impacts of operation in each section of Chapter 4, Environmental Setting and Impacts. Operation of the reservoir following project construction and the related effects of operation are discussed throughout the EIR where appropriate (e.g., Vol. 1; Section 4.4, pages 4.4-79 – 4.4-117; Section 4.5, pages 4.5-60 – 4.5-82). The commenter provides more specific comments in his testimony (below), as well as in three other comment sets provided by this commenter (Jeff Miller) (O-ACA2, O-ACA3, and O-ACA&CBD2), and more detailed responses to these comments are provided in this Comments and Responses document.

O-ACA1-04 The comment asserts that the proposed stream flow releases are tailored for resident rainbow trout, per the 1997 Memorandum of Understanding between the SFPUC and California Department of Fish and Game, and do not adequately address flows for migratory fish.

Please refer to the master response presented in Section 10.4, Fisheries, specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for information on the flow schedules proposed as part of the CDRP and to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of effects on steelhead and monitoring and adaptive management.

O-ACA1-05 The comment asks that restoration of steelhead, native fish, and wildlife downstream be included as part of the project purpose.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals, for responses to comments regarding the restoration of native fish, steelhead, and other wildlife as part of the project purpose.

O-ACA1-06 The comment states that because SFPUC lands are already public lands protected from development and managed under SFPUC's watershed management plan and stewardship policy, the use of SFPUC lands in the Alameda watershed does not provide benefits to species. The comment states that mitigation areas should be established on private land at risk from development to offset impacts from project construction on sensitive species and habitat.

For mitigation of significant impacts on special-status species and sensitive habitats during construction, preservation of mitigation sites is only one element of the overall mitigation approach. As stated in the discussion of Mitigation Measure 5.4.3, on EIR page 5-10 (Volume 2, Chapter 5, Section 5.4):

> "The final compensation plan(s) shall fully compensate for direct and indirect impacts on special-status species and for the temporal, long-term, and permanent losses of habitat areas, functions, and services and shall include: a description of the resource types and amounts that will be provided; the methods of compensation (i.e., restoration, rehabilitation, re-establishment, establishment, enhancement, and/or preservation); and the manner in which the resource functions and services of the compensation will address the related project impacts."

Mitigation Measures 5.4.3a through 5.4.3l go on to describe:

- The extent and timing of compensation area development for various species and habitats,
- Requirements for long-term preservation of the compensation sites,
- The establishment of compensation ratios for all habitat types to ensure no net loss of habitat areas, functions, and services, taking into account various factors (i.e., each acre of impact may require more than one acre of compensation area),
- Establishment of success criteria for activities on compensation sites (e.g., habitat restoration, rehabilitation, enhancement), and
- Requirements for development and implementation of maintenance, monitoring, long-term management, and adaptive management plans for compensation sites.

Mitigation requirements for the project include habitat restoration, rehabilitation, re-establishment, establishment, and/or enhancement with long-term maintenance in perpetuity to fully mitigate for the temporal, long-term, and permanent losses of habitat areas, functions, and services. Mitigation under this project includes funding to implement habitat improvements, long-term maintenance, and preservation.

Benefits to species and habitats would be gained by the active restoration, rehabilitation, re-establishment, establishment, and/or enhancement of various habitat types whether the compensation site is on publicly held protected lands or private lands at risk of development. Mitigation efforts on sites within the SFPUC watershed will enhance and improve habitat and species benefits specifically target to compensate for impacts elsewhere in the watershed.

In addition, at present, the SFPUC land uses are not restricted by conservation easements or other legally binding instruments specifically providing for the long-term management and preservation of the proposed mitigation sites for habitat compensation purposes. Under Mitigation Measure 5.4.3, such legally binding instruments are required to be put in place to guarantee the long-term protection and preservation of the habitat values of the proposed mitigation sites.. SFPUC lands within the Alameda Watershed have been used for a variety of purposes that have adverse effects on habitat quality, including, most notably, aggregate mining. SFPUC lands that are not needed for water supply or watershed protection purposes, such as the Koopman Road Mitigation Area, may be declared surplus lands and subsequently sold or leased for development (see Section 12.2 of this Comments and Responses document titled "Staff Initiated Text Changes", and specifically to text added to EIR Section 4.4, Vegetation and Wildlife, for information on the Koopman Road mitigation site). Therefore, the use of SFPUC Alameda Watershed lands for mitigation of significant impacts on special-status species and sensitive habitats during project construction is appropriate and consistent with CEQA. In addition, the SFPUC has developed the habitat compensation approach for CDRP, like other WSIP projects, in close coordination with and the concurrence of the California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), Regional Water Quality Control Board (RWQCB), U.S. Army Corps of Engineers (USACE), and U.S. Environmental Protection Agency (USEPA). These agencies, through their regulatory authority (i.e., state and federal Endangered Species Act authorization, CDFG Lake and Streambed Alteration Agreement, and Clean Water Act Section 401 and 404 Authorizations) will continue to coordinate with the SFPUC to assure that mitigation measure requirements identified in the EIR pertaining to the mitigation sites are fully implemented.

O-ACA1-07 The comment states that the approach used in the Draft EIR for evaluating impacts and providing mitigation for greenhouse gas (GHG) emissions is not adequate.

Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section 10.5.2, Construction GHG Emissions Impacts and Mitigation, for responses to comments regarding the appropriateness of the thresholds of significance for GHG emissions used in the EIR as well as a discussion of the adequacy of the mitigation measure to reduce construction-generated GHG emissions and the SFPUC's obligations under CEQA.

O-ACA1-08 The comment expresses support for bringing San Francisco's water supply system up to date. The comment also expresses the opinion that the environmental aspects of the project also need to be updated.

To the extent that this comment refers to earlier statements regarding EIR analysis of stream flows, mitigation areas, and greenhouse gas emissions, see Responses O-ACA1-01, O-ACA1-03, O-ACA1-04, O-ACA1-06, and O-ACA1-07 and the master responses referenced there.

11.2.2 ALAMEDA CREEK ALLIANCE, JEFF MILLER, 11/12/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-ACA2-01 The elements of the comment that describe past and current steelhead restoration efforts in Alameda Creek and support rebuilding the dam are acknowledged. The statement indicating that completing the proposed project and increasing reservoir levels will improve conditions for fish in the reservoir is also acknowledged. The comment states the opinion that operation of the water system after the CDRP is completed is a key issue and many individuals, particularly those from the East Bay, will be monitoring the SFPUC's stewardship of the project.

The comment includes the statement that San Francisco diverts "86 percent of the flows in the upper creek." It is assumed that this statement refers to Alameda Creek, and specifically the upper Alameda Creek subwatershed (see Figure 4.6.2 in the EIR [Vol. 1, Chapter 4, Section 4.6, page 4.6-7]). The upper Alameda Creek subwatershed refers to the portion of the creek upstream of the Alameda Creek Diversion Dam (ACDD). The ACDD is the only facility capable of water diversions in upper Alameda Creek, and it diverts water to Calaveras Reservoir.

Annual flows in upper Alameda Creek and diversions at the ACDD vary widely from year to year based on levels of precipitation, reservoir operations, and other factors (see EIR, Vol. 1, Chapter 4, Section 4.6, pages 4.6-20 – 4.6-23 and 4.6-33 – 4.6-37 for existing conditions). In dry years, a very large proportion of water in upper Alameda Creek may be diverted at the ACDD. In wet years with high episodic flows during storm events, a small proportion of the overall flows may be diverted at the ACDD. An overarching statement that San Francisco diverts 86 percent of the flows in upper Alameda Creek is inaccurate.

Using data from Table 4.6.13 in the EIR, "Modeled Average Monthly Unimpaired Flow to ACDD, Water Years 1921-2002 (acre-feet)" (Vol. 1, Chapter 4, Section 4.6, page 4.6-34) to represent flows reaching the ACDD, and data from Table 4.6.19 in the EIR, "Existing and Estimated with-Proposed Project Average Annual Flow in Alameda Creek Downstream of the ACDD" (Vol. 1, Chapter 4, Section 4.6, page 4.6-82) to represent flows bypassing the ACDD; under existing conditions with Division of Safety of Dams restrictions, annual diversions during wet years represent 13.6 percent of total annual flows to the ACDD (26,307 acre-feet [AF] flow to ACDD and 25,331 AF flow in Alameda Creek below ACDD). During dry years annual diversions represent 96.9 percent of total annual flows to the ACDD (1,880 AF flow to the ACDD and 58 af flow in Alameda Creek below the ACDD). Combining all year types annual diversions represent 31.3 percent of total annual flows to the ACDD (12,879 AF flow to the ACDD and 8,842 AF flow in Alameda Creek below the ACDD).

O-ACA2-02 The comment asserts that flows proposed in the Draft EIR are designed for resident fish and are not adequate for fish migration. The commenter believes that federal and state agencies will have a similar view and will require additional flows to ensure compliance with the federal Endangered Species Act (FESA) and the state Fish and Game Code.

The EIR evaluates habitat requirements for all steelhead life stages in the Alameda Creek watershed (i.e., spawning and egg incubation, rearing, and migration) using field investigations and physical habitat modeling tools that represent the best available science. Please refer to the master response presented in Section 10.4, Fisheries, specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, regarding flow schedules included in project implementation and effects on fisheries, including steelhead. See Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for detailed information on the proposed instream flow schedules and compliance with the Fish and Game Code. Also see Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses related to proposed flow schedules for steelhead and FESA compliance, and to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for responses to comments regarding the presence of other salmon species within Alameda Creek.

As indicated in the analysis of cumulative fisheries impacts in the EIR (Vol. 2, Chapter 6, pages 6-23 – 6-32), implementation of the CDRP as described in the

EIR would not result in significant adverse effects to steelhead trout. In addition, as discussed in Chapter 9 of this Comments and Responses document, since publication of the Draft EIR, the SFPUC has developed a variant to the project analyzed in the Draft EIR. This CDRP Variant, which is the preferred project, includes enhancements for native fishes and other aquatic species that have been developed, in part, as a result of the SFPUC's ongoing coordination with federal and state resource agencies. The CDRP Variant includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the ACDD and Calaveras Reservoir, and implementation of an adaptive management implementation plan. Information on the adequacy of flows for migratory fish under the Draft EIR project as well as the CDRP Variant is provided in the master response sections listed above.

O-ACA2-03 The comment expresses a concern with the approach to mitigating construction related habitat losses included in the Draft EIR. The comment states the opinion that construction-generated habitat losses should be mitigated with either conservation easements or acquisition of private lands, and not by changing management on lands that are already protected.

This comment expresses the same concern as Comment O-ACA1-06 (provided by the same commenter at an earlier public meeting). Please see Response O-ACA1-06.

O-ACA2-04 The comment asserts that the approach used in the Draft EIR for evaluating impacts and providing mitigation for greenhouse gas emissions is not adequate and that carbon offsets should be considered as additional mitigation.

This comment is almost identical to Comment O-ACA1-07 (provided by the same commenter at an earlier public meeting), with the exception of adding the concept of carbon offsets as a mitigation option. The same response still applies.

Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section 10.5.2, Construction GHG Emissions Impacts and Mitigation, for responses to comments regarding the appropriateness of the thresholds of significance used in the EIR for GHG emissions, an evaluation of carbon offsets as a potential mitigation approach, a discussion of the adequacy of the EIR construction GHG emissions mitigation, and the SFPUC's obligations under CEQA.

11.2.3 ALAMEDA CREEK ALLIANCE, JEFF MILLER, 12/14/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-ACA3-01 The comment states that many agencies have been working for over a decade to achieve fish passage on Alameda Creek and it is likely that steelhead will have access to the watershed by the time that the CDRP is completed.

These statements are acknowledged and are consistent with the analysis of cumulative effects on steelhead included in the EIR. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding the future cumulative scenario presented in the EIR. This scenario assumes that steelhead access to the watershed has been restored upstream of the BART weir while the CDRP is either under construction or is operating.

O-ACA3-02 The comment, which supports rebuilding the Calaveras Dam because it will improve conditions for fish in the reservoir and downstream, is acknowledged.

The comment does not address the content, analysis, conclusions, or adequacy of the EIR; therefore, no further response is required.

O-ACA3-03 The comment correctly states that the CDRP involves the operation of two dams, the Calaveras Dam and the Alameda Creek Diversion Dam (ACDD). The comment states that although the CDRP as currently described is an improvement over what was proposed in the WSIP Programmatic EIR, this improvement can be attributed to having a low baseline condition for the comparison. The commenter is concerned with project operation, and the comment states that the proposed flow schedule is aimed at resident rainbow trout and is not compatible with a self-sustaining steelhead run.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for information on flow schedules proposed as part of the

CDRP; and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding flow-related effects on fish and habitat conditions;.

O-ACA3-04 The comment states that since the EIR scoping process in 2005, the Alameda Creek Alliance has asked that steelhead restoration be included as one of the project goals, and the commenter states the opinion that doing so would have minimized project conflicts.

Regarding project goals, please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals, for responses to comments about this topic.

11.2.4 ALAMEDA CREEK ALLIANCE (ACA) AND THE CENTER FOR BIOLOGICAL DIVERSITY (CBD), JEFF MILLER (DIRECTOR OF ACA) AND PETER GALVIN (DIRECTOR OF CBD), 12/18/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

Many of the issues raised in these comments are addressed in project modifications included in the CDRP Variant, which resulted from the SFPUC's ongoing coordination with resource agencies, as well as its project development and design process. The Variant includes implementing instream flow schedules for Alameda and Calaveras Creeks; installing a fish screen at the upstream end of the diversion tunnel at the Alameda Creek Diversion Dam (ACDD), resulting in a decrease in the rate of diversion, and fish screens at Calaveras Dam Adits #1 and #2; and constructing a fish ladder for fish passage at the ACDD. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the Variant. In addition, many of the topics raised in these comments are addressed in the following master responses included in this report:

- Section 10.2, Baselines Used in the Environmental Analysis
- Section 10.3, Hydrology
- Section 10.4, Fisheries
- Section 10.5, Greenhouse Gas Emissions

Cross-references to specific topics within these master responses are provided in the responses that follow, as appropriate.

O-ACA&CBD1-01 The comment states that restoration of native fish should be included as a primary goal of the project, and notes that the commenter's scoping comments expressed this opinion.

The project goals are discussed on EIR pages 3-2 – 3-6 (Vol. 1, Chapter 3, Section 3.2) in "Project Purpose and Objectives" in the Project Description. Please refer to the master response presented in

Section 10.4, Fisheries, and specifically to Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals, for response to this comment.

Regarding the commenter's scoping comment on this topic, the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.) require that, for projects of statewide, regional, or areawide significance, the lead agency shall conduct at least one scoping meeting (Section 15206). The required scoping process for the CDRP was carried out during October and November 2005. Scoping may be used to identify the range of actions, alternatives, mitigation measures, and significant effects to be evaluated in depth in an EIR; however, the CEQA Guidelines do not require that project goals be determined through scoping or other community involvement. Rather, CEQA[1] requires that the project description contain a statement of objectives (i.e., goals) sought by the proposed project. The project proponent can exercise broad discretion in the development of project goals. Here, the SFPUC acted in its capacity as a department of the City and County of San Francisco and as the agency responsible for providing water service to its retail and wholesale customers in developing and adopting the Water System Improvement Program (WSIP) goals and then formulating project-specific goals for the CDRP consistent with its mission and obligations. The project's goals are consistent with CEQA requirements.

O-ACA&CBD1-02 The comment asserts that the Draft EIR is flawed because of the baseline conditions selected for analysis of the project's impacts.

For reasons stated in the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, the San Francisco Planning Department disagrees with this assertion. Please refer to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU), and Unimpaired Flows, for a response to this comment.

O-ACA&CBD1-03 The comment states that a major flaw in the Draft EIR is the reliance on flows agreed to in the 1997 Memorandum of Understanding (MOU) as the basis of mitigations for fishery and hydrology impacts. The comment also states that the 1997 MOU was designed for the habitat needs of rainbow trout and not for migratory steelhead or Chinook salmon, and that the EIR should characterize the portion of the 1997 MOU flows that would be provided by natural runoff compared to the portion of the flows that would be released or bypassed at the Calaveras Dam and the ACDD.

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[1] CEQA Guidelines Section 15124(b).

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a description of the flow release schedules for steelhead and information on the analyses that were conducted to assess the flow release schedules. Please refer to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for a discussion of Chinook salmon.

Regarding the comment on the need to characterize the portion of the 1997 MOU flow schedule (flow schedule for resident trout and other native aquatic life) that would be met by natural runoff, please see the master response presented in Section 10.3, Hydrology, Section 10.3.3, Diversions and Streamflow, and specifically the subsection entitled "Releases from Calaveras Dam and the ACDD." That section of the master response also addresses this comment with respect to the flow schedules proposed under the CDRP Variant. The flow schedules were developed based on an assessment of the flows needed to support habitat for native fishes. Native fishes will benefit from the flow schedules whether the water that enables compliance with the flow schedules is natural flow or water released from the SFPUC's dams. The flow schedules were developed by the SFPUC in consultation with CDFG and NMFS.

O-ACA&CBD1-04 The comment states that a major flaw in the Draft EIR is that the proposed operation of the ACDD would be in conflict with the California Fish and Game Code, the Federal Endangered Species Act (FESA), and the SFPUC's Environmental Stewardship Policy. The comment asserts that the Draft EIR does not fully analyze the impacts of the proposed operation of the ACDD on fish passage or on the quality and quantity of fishery habitat, and does not provide adequate mitigations for these impacts.

This comment summarizes multiple issues raised in more detailed comments in this letter. Please refer to the master response presented in

Section 10.4, Fisheries, Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and specifically to the subsection entitled "Compliance with the Fish and Game Code" regarding compliance with state laws; see Responses O-ACA&CBD1-24, -26, -27, and -29 regarding consistency with the federal Endangered Species Act; and see Response A-CDFG-10 regarding compliance with the SFPUC's Environmental Stewardship Policy.

O-ACA&CBD1-05 The comment asserts that the approach to mitigation for project-specific and cumulative impacts is flawed in that the measures are ineffective or insufficient, disingenuous, and hollow.

Mitigation measures that would reduce or eliminate otherwise significant impacts of the CDRP and its cumulative impacts are detailed in EIR Vol. 2, Chapter 5, pages 5-1 – 5-45. Mitigation measures for impacts on sensitive species are presented in Section 5.4, Vegetation and Wildlife; impacts on resident trout and other fish species are presented in Section 5.6, Fisheries and Aquatic Habitat; and impacts on hydrology are presented in Section 5.7, Hydrology. Cumulative impacts are analyzed in EIR Chapter 6. This chapter indicates, in Section 6.2.3.2, that mitigation measures identified in Chapter 5 for impacts on vegetation and wildlife would reduce the project's contribution to cumulative impacts to a less-than-significant level (EIR page 6-23). The discussion of cumulative impacts on fisheries and aquatic habitat in EIR Section 6.2.3.3, pages 6-23 – 6-32, explains that mitigation measures to reduce construction-related water quality impacts would mitigate the CDRP's contribution to cumulative impacts on fisheries and aquatic habitat to a less-than-significant level. The analysis concludes that operation of the CDRP would have a beneficial effect on possible future steelhead and therefore would not contribute to significant cumulative impacts, and that no mitigation measures are necessary. The analysis of cumulative hydrology impacts in Section 6.2.3.4 supports the conclusion that the CDRP would not contribute to significant cumulative impacts; therefore, no mitigation measures are necessary. Also refer to the master responses presented in Sections 10.3, Hydrology, and 10.4, Fisheries. The analysis and discussion of greenhouse gas (GHG) emissions in Impact 4.13.7 on EIR pages 4.13-42 – 4.13-44 (Vol. 2, Chapter 4, Section 4.13) explains that implementation of exhaust and diesel particulate matter controls (identified in Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b on EIR pages 5-39 – 5-40) would reduce project-generated GHG; however, based on the quantitative significance threshold for average daily construction-related GHG emissions that BAAQMD had been considering at the time the Draft EIR was published, the impact would remain significant and unavoidable. Refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, for more information.

The comment does not provide specific information as to how the measures may be ineffective or insufficient. Later comments raise specific issues related to mitigation measures, some of which relate to these topics; responses to these issues are presented below.

Refer to Chapter 12 of this report, Draft EIR Revisions, to view changes to mitigation measures made since publication of the Draft EIR.

O-ACA&CBD1-06 The comment asserts that:

- The fisheries and hydrology sections do not reflect the full analysis of the effects of SFPUC water supply operations with respect to diversion of upper Alameda Creek flows;
- The approach taken (i.e., evaluating changes between Division of Safety of Dams (DSOD)–restricted conditions and future conditions after the restrictions are removed) is unsatisfactory; and
- The Draft EIR uses flawed assumptions, assuming that current conditions (fish populations and habitat distribution and quality) are based on DSOD-restricted conditions, when current conditions have resulted from water management practices since the construction of SFPUC facilities.

These comments are responded to in the master response presented in Section 10.2, Baseline Used in the Environmental Analysis; refer to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and the California Department of Fish and Game (CDFG), and Unimpaired Flows, for detailed discussion of these issues.

O-ACA&CBD1-07 The comment states that the Draft EIR failed to adequately characterize the effects of re-diverting flows currently bypassed downstream to Alameda Creek under the DSOD restrictions and avoids a clear comparison of before and after conditions in terms of streamflow, and distribution and quality of fish habitat. The comment states that to address these concerns, the EIR should include an evaluation of streamflow and suitable fish habitat compared to the DSOD-restricted baseline conditions, and that this analysis should characterize the hydrologic regime at a reasonable time-step.

The San Francisco Planning Department disagrees with this assertion. Refer to the master response presented in Section 10.2, and specifically Section 10.2.2, Use of Appropriate Baselines, regarding CEQA requirements for baselines. The EIR includes a description of flows and downstream conditions in Alameda Creek under the current DSOD-restricted baseline condition; the EIR analyzes the effects of re-diverting flows currently bypassed downstream to Alameda Creek compared to this baseline and at an appropriate time-step for the CEQA analysis. Tables 4.6.16 and 4.6.17 (EIR pages 4.6-72 and 4.6-73) present a comparison of flows in Calaveras Creek with and without the Draft EIR project in different water year types. Tables 4.6.18 and 4.6.19 (EIR pages 4.6-81 and 4.6-82) present a comparison of flows in Alameda Creek downstream of the ACDD with and without the Draft EIR project in different water year types. Tables 4.6.20 and 4.6.21 (EIR pages 4.6-91 and 4.6-92) present a comparison of flows in Alameda Creek below the Calaveras Creek confluence with and without the Draft EIR project in different water year types. The hydrologic analysis in the EIR employed models that used monthly and 15-minute time-steps. Used together, the models provide a reasonable basis for analyzing the effects of the CDRP on streamflow. For more information, please see the master response presented in Section 10. 3, Hydrology, and specifically Section 10.3.2, Hydrologic Modeling.

Similar information for the CDRP Variant is contained in Chapter 9. Tables 9-14 and 9-15 present a comparison of flows in Calaveras Creek with and without the CDRP Variant in different water year types. Tables 9-16 and 9-17 present a comparison of flows in Alameda Creek downstream of the ACDD different water year types. Tables 9-18 and 9-19 present a comparison of flows in Alameda Creek below the Calaveras Creek confluence with and without the CDRP Variant in different water year types.

O-ACA&CBD1-08 The comment states that the EIR must consider the full operation impacts of ACDD and Calaveras Reservoir and that the cumulative impact analysis of the effects of water diversions on the watershed and fish habitat should compare conditions without any water supply operations (unimpaired flows) to conditions with the CDRP.

Please refer to the master response presented in Section 10.4, Fisheries, Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and specifically to the section entitled "Past and Present Effects."

O-ACA&CBD1-09 The comment states that reasonable standards of flow impairment are available with which to correlate diversion rates and impacts to fisheries and that the fisheries analysis in the EIR needs to identify the timing and magnitude of flows that would be necessary to provide suitable habitat conditions and characterize an acceptable level of impairment.

Regarding "reasonable standards of flow impairment with which to correlate diversion rates and impacts to fisheries," the EIR defines significance criteria and approach to analysis for assessing impacts on hydrology and fisheries (pages 4.6-57 – 4.6-63 and 4.5-52 – 4.5-54, respectively). The significance criteria and analytical methodologies are based on generally-accepted standards for environmental analysis, including Appendix G of the CEQA Guidelines and scientific literature on the resource topic (e.g., see reference section under each resource topic). The comment also implies that regardless of what the project is proposing, the EIR is obligated to identify the appropriate timing and magnitude of flows for providing suitable fish habitat. Under CEQA, the EIR is required to analyze the potential significant impacts of the project and to identify feasible mitigation measures and/or alternatives to avoid or reduce those impacts, which this EIR does. Nevertheless, the EIR presents detailed information on the life history and habitat requirements of fisheries, including flow requirements, and uses this information to assess the impacts of the proposed project.

The potential effects of project operations on fisheries downstream of the ACDD and Calaveras Dam are analyzed in EIR Chapter 4, Section 4.5 (Vol. 1, Impacts 4.5-5, 4.5-6, and 4.5-8, pages 4.5-60 – 4.5-76 and 4.5-78 – 4.5-80); Chapter 6 (Vol. 2); and Appendix J (Vol. 3). Measures to mitigate the significant impacts of the Draft EIR project are presented in Section 5.5 (Vol. 2, pages 5-16 to 5-17). Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Sections 10.4.5, Current and Proposed Operations of the ACDD and

Calaveras Dam, regarding issues related to the potential effects of project operations on fisheries downstream of the ACDD and Calaveras Dam. In addition, please refer to the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.3, Diversions and Streamflow, regarding issues related to diversion rates.

Taken in context with other comments presented in this letter, this comment may also be suggesting that the EIR analysis assume a baseline with unimpaired flows. This would be incorrect; refer to the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, specifically Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and the California Department of Fish and Game (CDFG), and Unimpaired Flows.

Regarding the revised flow schedules that are proposed as part of the CDRP Variant, refer to Chapter 9, Section 9.2 and to Sections 9.3.5 and 9.3.6 for the analysis of the revised flow schedules on fisheries and hydrology, respectively.

O-ACA&CBD1-10 The comment states that the Draft EIR disregards cumulative impacts related to reducing the range of steelhead due to water diversions and passage barriers, which the commenter asserts should involve a mandatory finding of significance. The comment also states that the Draft EIR does not acknowledge migration impacts and that meaningful mitigation should be provided to reduce the unavoidable cumulative adverse impacts of altering the flow regime associated with the CDRP and the Upper Alameda Creek Filter Gallery Project.

This comment may be premised on the assertion made in other comments that the baseline for determining the project's impacts should be unimpaired conditions. As indicated in previous responses, this assertion is incorrect. Please refer to the master response presented in Section 10.2, Baseline Used in the Environmental Analysis, and specifically to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and the

California Department of Fish and Game (CDFG), and Unimpaired Flows, regarding unimpaired flows as baseline conditions.

In response to the statement that "mandatory findings of significance" should be made regarding cumulative impacts on steelhead, it should be noted that under CEQA Guidelines (Section 15065), mandatory findings of significance refer to findings that a lead agency needs to make in determining whether an EIR needs to be prepared for a project. Section 15065 identifies several criteria which require the preparation of an EIR. The criteria include the project's potential to substantially reduce the habitat of a fish species, restrict the range of an endangered, rare or threatened species, and the project's potential to result in cumulative impacts (Section 15065(a)). Consistent with CEQA Guidelines, the EIR considered these criteria in assessing the project's contribution to cumulative impacts on fisheries and aquatic habitat, including steelhead, beginning on page 6-23 (Vol. 2, Chapter 6). This analysis specifically addresses the altered habitat and fish migration barriers caused by past and current water supply projects (including Calaveras Dam), and other modifications in the Alameda Creek watershed. The EIR identifies that the combined effects of past and present projects have resulted in a significant adverse cumulative impact on steelhead as the Alameda Creek steelhead run was eliminated over the past century by the placement of obstructions to migration. The EIR concludes that the project's construction activities have the potential to result in a cumulatively considerable contribution to water quality impacts on steelhead, but that with the implementation of mitigation measures identified in the EIR, the project's contribution to cumulative water quality impacts on steelhead would be less than significant (Vol. 2, Chapter 6, pages 6-26 – 6-28). The EIR also finds that the project's flow release schedule would have a beneficial impact on steelhead as more reliable minimum flows would occur in the upper Alameda Creek compared with existing conditions.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for a discussion of passage issues, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of effects on steelhead, monitoring and adaptive management, and the Upper Alameda Creek Filter Gallery Project.

As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes a revised flow schedule to address habitat needs for steelhead, an adaptive management implementation plan, and other fishery enhancements. Refer to Chapter 9 of this Comments and Responses document for a description and analysis of the Variant; Section 9.5 addresses cumulative impacts associated with implementation of the Variant.

O-ACA&CBD1-11 The comment states that the EIR errs in assuming that flow provisions agreed to under the 1997 MOU are not part of the environmental baseline, and that there is no reasonable expectation that future compliance can be offered as feasible mitigation.

The flow schedules proposed as part of the Draft EIR project are based on the 1997 MOU; the 1997 MOU is not part of the baseline or proposed as mitigation. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding compliance with the 1997 MOU, and to the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, and specifically to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and the California Department of Fish and Game (CDFG), and Unimpaired Flows, regarding the suggested use of the 1997 MOU flows as part of the baseline.

O-ACA&CBD1-12 The comment makes two points:

- The baseline for the impact analysis should not be "water supply operations without fishery flows" because "there is no project alternative that proposes water supply operations without fishery flows"; and
- "The three flow regimes affecting the CDRP environmental analysis (i.e., unimpaired flows, pre-project flows, and post-project flows) must be clearly defined and flows should not be used as a 'shell game' either to hide adverse impacts or try to show beneficial ones."

Regarding the first bullet, two clarifications are required. First, under CEQA, the baseline normally consists of the existing environmental conditions at the time the Notice of Preparation is published; alternatives do not constitute the baseline nor does CEQA require development of alternatives to the baseline condition. Second, the No Project Alternative would not be expected to meet flow releases and/or bypasses consistent with the MOU (see first paragraph on EIR page 7-27, Vol. 2).

Refer to the master response presented in Section 10.2, Baseline Used in the Environmental Analysis, for further response, and specifically to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and the California Department of Fish and Game (CDFG), and Unimpaired Flows, regarding the baseline issues. Refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a clear definition of proposed flows. In addition, as noted above, after the Draft EIR was published the SFPUC began considering a variant of the project. The proposed updated flow schedules included in the CDRP Variant supersede the flow schedules associated with the Draft EIR project. Refer to Chapter 9, of this Comments and Responses document, for a description and evaluation of the CDRP Variant.

O-ACA&CBD1-13 The comment states that construction impacts on the resident trout population in Calaveras Reservoir and its tributaries are inadequately assessed and mitigated, and that this section of the analysis should be revisited.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for responses to comments regarding construction-related impacts on Calaveras Reservoir.

O-ACA&CBD1-14 The comment states that the Draft EIR does not discuss the potential for listed steelhead to migrate into the project area during construction of the dam, and that the EIR should analyze the potential impacts of operating Calaveras Dam during the four years of construction without bypass flows from the dam. The comment also states that appropriate mitigation would be an interim operation plan for providing sufficient water downstream of SFPUC dams, if needed during the construction period, to keep fish downstream in good condition.

As stated in the EIR, flows bypassed at the ACDD and existing seepage flows would continue to provide flows to Alameda Creek and Calaveras Creek during the two shutdown periods. These base flows support the current fish community downstream of the dam during summer periods. Flow conditions during the construction period would be very similar to those that exist under the existing condition. Additionally, the EIR addresses the potential for steelhead to be present in the study area during the construction period beginning on page 6-23 (Vol. 2, Chapter 6). Please refer to the master response presented in Section 10.3. Hydrology, specifically Section 10.3.3, Diversions and Streamflow, which addresses the provision of flows should steelhead regain access to Alameda Creek above the BART weir during the construction period. Please also refer to the master response in Section 10.4, Fisheries, and specifically to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for additional response to comments regarding this issue.

O-ACA&CBD1-15 The comment states that the EIR should include a more thorough analysis of the cumulative impacts associated with the filter gallery project, "a reasonably foreseeable future project that should be considered a 'related project' under CEQA."

Please see Section 10.3.6, Cumulative Impacts, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding the manner in which the Upper Alameda Creek Filter Gallery Project was evaluated as a cumulative project. Regarding consideration of the filter gallery as a "related project" under CEQA, the comment is presumably asserting that the filter gallery project should be addressed as part of the CDRP. CEQA does not define the term "related project." Under the National Environmental Policy Act, the concept informs decisions on whether two projects have independent utility. While the filter gallery project is addressed as a reasonably foreseeable *cumulative project* in the CDRP EIR, it is not a reasonably foreseeable *future phase* of the CDRP.

O-ACA&CBD1-16 This comment summarizes previous comments made in the letter and makes the following points:

- The project and EIR should propose and evaluate flow regimes that reflect natural seasonal streamflow patterns and account for all life stages of steelhead trout in all portions of the watershed affected by SFPUC operations. Proposed operations should be consistent with anadromous steelhead habitat needs.
- The project should be consistent with the SFPUC's Water Enterprise Environmental Stewardship Policy, which requires that flow release schedules incorporate the input received through collaboration with other stakeholders in the watershed.
- The Final EIR should include a revised project purpose that has steelhead restoration as a co-equal goal.
- The Final EIR should be supplemented with more thorough analysis of fisheries and hydrology impacts and attendant "meaningful mitigations."

Please see Response O-Acterra et al.-16 regarding natural seasonal streamflow patterns. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for information on the project's consistency with the SFPUC Water Enterprise Environmental Stewardship Policy, the efforts of the Alameda Creek Fisheries Restoration Workgroup, and ongoing restoration efforts on Alameda Creek. A more detailed description of the hydrologic study to determine the amount of water needed to support steelhead is provided in the *Calaveras Dam Replacement Project, Fisheries Technical Report* (ETJV 2008; see Appendix A in that document), which is available for public review at the San Francisco Planning Department.

Please also refer to Response A-CDFG-10 regarding the consistency of the project with the Water Enterprise Environmental Stewardship Policy. This policy states that the SFPUC strives for "collaborative environmental stewardship;" that the SFPUC will "solicit input and collaboration on its plans and implementation from all interested and affected parties, including local, state, and federal agencies, non-governmental organizations, and members of the public;" and that the SFPUC will "include communities and stakeholders in monitoring, restoration and other stewardship activities to the extent possible." The SFPUC's completed and ongoing activities, including removal of Niles and Sunol dams, active participation in the Alameda Creek Fisheries Restoration Workgroup, and development of a Habitat Conservation Plan for the Alameda Watershed, are consistent with this policy.

Please also refer to Section 10.4.3, Native Fish Restoration as One the Project Purposes and Goals, for a discussion of project purposes and goals.

Lastly, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an Adaptive Management Implementation Plan (AMIP). Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-ACA&CBD1-17 This comment makes several points:

- The Draft EIR only describes the relative effects of two SFPUC operating conditions [comment presumably refers to baseline conditions and future with-project conditions].
- [Future with-project] habitat conditions are considered "almost universally to be better than baseline conditions (with only incidental flows going to the creek)."
- The EIR should examine proposed flow regimes in a context of flows existing under unimpaired conditions, and present side-by-side the unimpaired and impaired flow conditions in reaches affected by diversions at the ACDD and Calaveras Dam.
- The environmental baseline should assess impacts of Calaveras Dam and the ACDD [comment presumably means assess the impacts of operating these facilities relative to unimpaired, pre-dam conditions] regarding blockage of spawning and rearing habitat for steelhead, impairment of flows in Alameda Creek, and changes to downstream channel morphology and habitat.
- Data regarding Calaveras Reservoir inflow and the disposition of these flows are conspicuously lacking from the Draft EIR and must be presented to understand the biological effects of the project.

The master response presented in Section 10.2, Baselines Used in the Environmental Analysis, addresses the issues raised in the first, second, third, and fourth bullets. Regarding consideration of unimpaired, pre-dam conditions as the baseline, refer to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and the California Department of Fish and Game (CDFG), and Unimpaired Flows.

Regarding the last bullet, EIR Vol. 1, Chapter 3, Section 3.3.2.1 (beginning on page 3-14) describes the Calaveras Dam watershed, indicates that the reservoir impounds all of the flows from Calaveras Creek and Arroyo Hondo, and states that "prior to 2002, in a typical year, Alameda Creek contributed most of its flow (approximately 6,000 acre-feet, representing 14 percent of the 42,000 acre-feet per year combined flow) to Calaveras Reservoir." The Setting section in Vol. 1, Chapter 4, Section 4.6, Hydrology (see the subsection entitled "Water Courses Supplying Calaveras Reservoir," beginning on EIR page 4.6-12), presents detailed descriptions of flows in these watercourses based on available gage data, and provides gage data for Alameda Creek above and below the ACDD.

Regarding the CDRP Variant, flow release schedules proposed for the Variant would supersede the 1997 Memorandum of Understanding flow schedule associated with the Draft EIR project. Section 9.3 (Chapter 9 of this Comments and Responses document) presents an evaluation of the environmental impacts of the CDRP Variant relative to the baseline used to evaluate Draft EIR project.

O-ACA&CBD1-18 The comment calls for an expansion of the primary study area and an analysis of the effects of the project on flow in Alameda Creek below its confluence with Arroyo de la Laguna.

The EIR includes an analysis of flow in Alameda Creek downstream of the confluence with Arroyo de la Laguna (pages 4.6-94 – 4.6-98). For more information, please see the master response presented in Section 10.3, Hydrology, specifically Section 10.3.3, Diversions and Streamflow, in the subsection entitled "Flow in Alameda Creek Downstream of Arroyo de la Laguna." An analysis of the effects of the CDRP Variant on streamflow in Calaveras and Alameda Creeks is contained in Chapter 9, Section 9.3, of this Comments and Responses document.

O-ACA&CBD1-19 The comment states that the Draft EIR has an incomplete discussion of compliance with the California Fish and Game Code and Endangered Species Act requirements to protect native fish and wildlife habitat.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for a discussion on Fish and Game Code requirements. See Responses O-ACA&CBD1-24, -26, -27, -29 and -30 regarding consistency with the federal and state Endangered Species Acts.

O-ACA&CBD1-20 The commenter references comments submitted by the CDFG on the WSIP Program Environmental Impact Report (PEIR) and requests that the EIR include a complete discussion of project compliance with Section 5937 of the California Fish and Game Code.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, under "Compliance with the Fish and Game Code," for response to comments on compliance with Fish and Game Code requirements.

O-ACA&CBD1-21 The comment makes reference to a letter from the CDFG, dated November 22, 2005, stating that the SFPUC should "consider utilizing the SFPUC's water storage facilities within the Alameda Creek watershed (i.e., San Antonio Reservoir) to meet the needed minimum bypass flows in the affected reach of Alameda Creek and in particular passage flows needed through the Sunol Valley." The comment reiterates the CDFG's suggestion and correctly notes that the CDRP EIR does not address releases from San Antonio Reservoir.

CDFG's suggestion is acknowledged; several components of the CDRP are consistent with it, as described herein. The Draft EIR project and the CDRP Variant provide for bypasses and releases from the ACDD and Calaveras Reservoir to support native fishes. The Draft EIR project includes bypasses and releases to meet the flow schedule for resident trout contained in the 1997 MOU (Figure 3.16, page 3-68) and the flow schedule for steelhead (see EIR pages 3-66 – 3-70). The CDRP Variant includes bypasses and releases to meet its proposed instream flow schedule (see Chapter 9 of this Comments and Response document).

The bypasses and releases that are part of the Draft EIR project and the CDRP Variant benefit fish habitat in Calaveras Creek and Alameda Creek from the ACDD through the Sunol Valley and beyond.

O-ACA&CBD1-22 The commenter states that the proposed operation of the ACDD, Calaveras Reservoir, and San Antonio Reservoir may not be in compliance with Section 5937 of the California Fish and Game Code; that the EIR should discuss how the project is compatible with keeping the fish population downstream of the ACDD in good condition; and that the SFPUC must show that flows proposed for the Calaveras Reservoir will maintain healthy fish populations downstream.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam for a description of existing conditions, proposed flow release schedules, the analyses conducted to assess the flow release schedules; and compliance with the Fish and Game Code. Neither the Draft EIR project nor the CDRP Variant involve any changes in the operation of San Antonio Reservoir.

O-ACA&CBD1-23 The comment states that the proposed operation of the ACDD and Calaveras Dam without fish passage violates Section 5901 of the Fish and Game Code, which relates to any device that prevents or impedes the passage of fish up and down stream. The comment also states that operation of the ACDD will potentially affect fish passage at Little Yosemite.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section, 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, under “Compliance with the Fish and Game Code” and “Fish Passage at the ACDD and Calaveras Dam,” regarding this topic. Regarding the potential for operation of the ACDD to potentially affect fish passage at Little Yosemite, please see Vol. 3, Appendix J, pages 21 through 27, 30 through 32, and Figures 4.2, 4.3, and 4.5 for examples of review and analysis of historical daily average, daily maximum, and 15-minute flow data in relation to steelhead migration, including migration through natural barriers including the lower Sunol Valley and Little Yosemite. Due to uncertainties at Little Yosemite regarding the flows that would be required to allow for migration, mitigation measures identified for the Draft EIR project (Measures 5.5.5a and 5.5.5b, pages 5-16 – 5-17 in Vol. 2) the EIR included future coordination with NMFS, CDFG, and others combined with monitoring and adaptive management. Note that for the CDRP Variant, the AMIP directly addresses monitoring Little Yosemite, and the SFPUC has identified another project, "Modification of Natural Barriers in the Alameda Creek Watershed" (described Chapter 9, Section 9.5.1) as a new reasonably foreseeable future project that could ultimately lead to modification of the feature.

O-ACA&CBD1-24 The comment states that the Draft EIR does not ensure that the CDRP will comply with the FESA, specifically with regard to adequate streamflows for steelhead in Alameda Creek. The comment cites correspondence from NMFS to the SFPUC and an administrative draft Biological Assessment prepared for the CDRP in support of Section 7 consultation.

The NMFS and the U.S. Fish and Wildlife Service (USFWS), in consultation with the U.S. Army Corps of Engineers (USACE), are the agencies charged with administering FESA for the CDRP through Section 7 of the FESA. Through that process and associated permitting requirements, currently underway, NMFS and USFWS will ensure that the CDRP meets FESA requirements. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for additional discussion on this topic.

Note that the fishery enhancements in the CDRP Variant were developed as part of the Endangered Species Act consultation process with NMFS (refer to Chapter 9 for details on the Variant), as well as in coordination with CDFG in support of the Lake and Streambed Alteration Agreement process.

O-ACA&CBD1-25 The comment cites protective rules under Section 4(d) of FESA governing the "take" of listed steelhead, and states that many of the operations and activities contemplated under the CDRP could result in the unauthorized take of listed steelhead.

As stated in Response O-ACA&CBD1-24, NMFS will ensure that the CDRP meets FESA requirements through the Section 7 consultation process. See also the master response presented in Section 10.4, Fisheries, specifically Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead.

O-ACA&CBD1-26 The comment refers to impacts on critical habitat for federally listed California red-legged frog and Alameda whipsnake, and states that "[d]estruction or adverse modification of critical habitat cannot be authorized by federal agencies, and direct impacts to critical habitat should be avoided as part of the CDRP."

The EIR identifies areas designated as critical habitat for Alameda whipsnake and California red-legged frog (see Figure 4.4.9, EIR page 4.4-49; and Figure 4.4.6, EIR page 4.4-31); identifies significant impacts on these species and their habitat (EIR pages 4.4-84 – 4.4-97); and provides measures to mitigate those impacts to less-than-significant levels (beginning on EIR page 5-2). The CDRP, with resource agency input, has been modified throughout the planning and design phases to avoid and minimize impacts to critical habitat. The SFPUC and the San Francisco Planning Department recognize that the USFWS will consider impacts on critical habitat through the Section 7 consultation process (refer to EIR Section 3.7.3, Agency Approvals, in Vol. 1, Section 3.7, beginning on page 3-71, for more information).

An area of a species' critical habitat can be destroyed without appreciably diminishing the value of the species' critical habitat. As the USFWS's ESA consultation handbook (USFWS and NMFS 1998, page 4-34) explains:

> Adverse effects on individuals of a species or constituent elements or segments of critical habitat generally do not result in jeopardy or adverse modification determinations unless that loss, when added to the environmental baseline, is likely to result in significant adverse effects throughout the species' range, or appreciably diminish the capability of the critical habitat to satisfy essential requirements of the species.

The amount of proposed revised critical habitat for Alameda whipsnake that would be affected by the Draft EIR project represents less than 0.07 percent of the acreage proposed in Unit 5B.

The amount of revised critical habitat for California red-legged frog that would be affected by the CDRP represents less than 0.2 percent of the acreage proposed in Unit ALA-2.

As described in Section 9.3.4, Vegetation and Wildlife, of Chapter 9, with implementation of the CDRP Variant there would be minor increases in the total acreage of Alameda whipsnake and California red-legged frog habitat affected relative to the Draft EIR project, but the acreages affected would likewise represent a small fraction of the area proposed in Units 5B (for the whipsnake) and ALA-2 (for the frog).

O-ACA&CBD1-27 The comment states that CDRP operations should be consistent with published recovery plans for federally listed species.

Recovery plans are discussed generally on EIR page 4.4-62; the recovery plans for Alameda whipsnake, California red-legged frog, and Pacific bald eagle served as reference sources in the EIR (see pages 4.4-35, 4.4-50, and 4.4-53, Vol. 1, Chapter 4, Section 4.4.1.2). The SFPUC and the San Francisco Planning Department recognize that the USFWS and NMFS will consider recovery of listed species as part of future permits, authorizations, and approvals required under the FESA; see EIR Section 3.7.3, Agency Approvals (Vol. 1, Section 3.7, beginning on page 3-71). In issuing permits and approvals for the CDRP, the USFWS and NMFS will need to ensure that their actions do not negatively affect critical habitat to the extent that it impedes the recovery of federally listed species.

O-ACA&CBD1-28 The comment cites a fish passage report completed by the SFPUC, and states that the report's conclusions do not remove the obligation of the CDRP and SFPUC operations to comply with Section 5901 of the California Fish and Game Code and FESA.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, under "Compliance with the Fish and Game Code" regarding compliance with state laws. Also see Response O-ACA&CBD1-24 regarding compliance with FESA.

O-ACA&CBD1-29 The comment states that the project is required to undergo a FESA Section 7 consultation with NMFS, and that the Final EIR should incorporate requirements and conditions of the Biological Opinions issued by NMFS and USFWS on the project.

The project is currently undergoing Section 7 consultation, as described in Response O-ACA&CBD1-24 and the master response presented in Section 10.4, Fisheries, Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead. The USFWS and NMFS might issue their Biological Opinions for the CDRP before the CDRP EIR is certified. However, inclusion of the requirements and conditions of the Biological Opinions in the EIR is not necessary. The Section 7 consultation processes are separate from CEQA. The SFPUC has coordinated closely with NMFS and USFWS throughout the development of the CDRP and preparation of the EIR, and the CDRP Variant in part reflects those consultations.

O-ACA&CBD1-30 The comment indicates that the CDRP must fully mitigate impacts on species listed under the California Endangered Species Act (CESA), and lists numerous state-listed species that could be affected by the CDRP.

The EIR identifies impacts on state-listed species, including all of the species listed in the comment, in EIR Section 4.4.2.3 (Vol. 1, Chapter 4, beginning on page 4.4-75) and identifies measures to mitigate significant impacts on these species in Volume 2, Chapter 5, beginning on page 5-2. In its role as a trustee agency, the CDFG will consider the take of, and require implementation of measures to mitigate for impacts on, state-listed species under CESA. It is expected that the CDFG will rely on this EIR as a responsible and trustee agency to issue project approvals under its purview (refer to EIR Section 3.7.3, Agency Approvals, Vol. 1, Section 3.7, beginning on page 3-71). Also see Response O-Acterra et al.-12. The analysis of the effects of the CDRP Variant on biological resources is presented in Chapter 9, Sections 9.3.4 and 9.3.5, of this Comments and Responses document.

O-ACA&CBD1-31 The commenter correctly quotes excerpts from the Environmental Stewardship Policy, then states that "As discussed throughout this [letter], the DEIR suggests water system operations that do not protect and restore native species and the ecosystems that support them to the maximum extent practicable" (i.e., proposed water system operations are inconsistent with the Environmental Stewardship Policy), and that releases from the CDRP may not be consistent with applicable state and federal laws as well as the SFPUC Water Enterprise Environmental Stewardship Policy.

Please refer to Response A-CDFG-10 regarding project consistency with the Environmental Stewardship Policy with respect to diversions and releases from SFPUC reservoirs.

Regarding the statement that aspects of the CDRP may not be consistent with applicable state and federal laws, refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, in the subsection entitled "Compliance with the Fish and Game Code;" and to Response O-ACA&CBD1-24, which addresses consistency with FESA.

O-ACA&CBD1-32 The comment states that the Draft EIR does not include an adequate analysis of the effects of diversions of Alameda Creek water to Calaveras Reservoir on streamflow, particularly with respect to how operation of the CDRP would alter the timing and quantity of instream flows. The comment states that to characterize the effects of the CDRP, the EIR must compare the timing and quantity of Calaveras Reservoir inflow with the timing and quantity of reservoir releases to Calaveras Creek, and that the overall effects of the project would be clarified by comparing the total average inflow by water year type during the entire period of record with the total average Calaveras Creek releases.

The EIR includes a detailed analysis of the Draft EIR project's effects on streamflow in both Calaveras and Alameda Creeks (pages 4.6-68 – 4.6-98). A similar analysis of the effects of the CDRP Variant on streamflow in Calaveras and Alameda Creeks is contained in Chapter 9 of this Response to Comments document. For further information on the proportions of total runoff from the Calaveras Reservoir watershed that the SFPUC diverts under the existing condition, with the Draft EIR project and with the CDRP Variant, please see the master response presented in Section 10.3, Hydrology, Section 10.3.3, Diversions and Streamflows, in the subsection entitled "SFPUC's Total Annual Diversions from the Alameda Creek Watershed."

O-ACA&CBD1-33 The comment makes two points:

- Development of mitigation measures to benefit fish must be informed by an understanding of system impairment at biologically meaningful time scales; and
- The "maximum conservation or capture of runoff on a long-term basis" operational objective should be revised for consistency with the listing of steelhead under the FESA.

Please see the master response presented in Section 10. 4, Fisheries, and specifically Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, under "Basis for Development of Flow Schedules." Please also refer to Section 10.4.5, Current and proposed Operations of the ACDD and Calaveras Dam, and specifically to the subsection entitled "Flow-Related Effects on Fish and Habitat Conditions."

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to the comment concerning consistency of CDRP operational objectives with the FESA listing status of steelhead.

O-ACA&CBD1-34 Referencing the EIR text, the comment states that the proposed flow schedules were developed to provide habitat functions necessary to meet the primary constituent elements (PCEs) for steelhead habitat, and that consideration was given to mimicking the variability of unimpaired flows downstream of SFPUC facilities. The comment also states that the flow schedules do not account for several PCEs (specifically, adult attraction, upstream passage, periodic channel-forming flows, or flows for smolt outmigration) and therefore do not mimic the natural hydrograph.

The EIR provides detailed analysis of the flow schedules for the Draft EIR project in relation to all freshwater PCEs for steelhead, beginning on page 6-23 (Vol. 2, Chapter 6) and in Appendix J (Vol. 3). The approach to the analysis of flow schedules relies on the PCE framework and provides separate discussions for migration, spawning and egg incubation, and rearing. Sections 4.5 and 4.6 (Vol. 1, Chapter 4) provides a detailed analysis of flows in relation to periodic channel-forming flows.

Also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft

EIR Project and CDRP Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding these topics. The *Calaveras Dam Replacement Project, Fisheries Technical Report* (ETJV 2008; see Appendix A of that document) provides a more detailed description of the hydrologic study conducted to determine the amount of water needed to support steelhead spawning. The report is available for review at the San Francisco Planning Department.

Regarding consistency of proposed flows with the natural hydrograph, the EIR (Vol. 1, pages 3-69 and 3-70, and Vol. 3, Appendix J) describes the proposed Draft EIR project flow schedules for steelhead, which provide varying minimum flows by water year type (e.g., wet, normal, and dry). This approach of providing varying minimum flows by water year type considered the natural variability of unimpaired flows in the watershed. Also see Response O-Acterra et al.-16.

The flow schedules proposed as part of the CDRP Variant would supersede the flow schedules included in the Draft EIR project. Proposed operation of the ACDD under the Variant would better mimic the natural hydrograph relative to either the existing condition or the Draft EIR project because of increased bypass flows and decreased maximum diversion. The Variant flows schedules and other fishery enhancements included in the Variant were developed in coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-ACA&CBD1-35 The comment makes the following points:

- The EIR should present hydrographs of Alameda Creek and Calaveras Creek and depict the percent impairment under the CDRP.
- The EIR should discuss the effects of proposed flow schedules on other anadromous fish species (Chinook salmon, Pacific lamprey).
- Flow targets during much of the year in wet and normal years may be met by natural runoff conditions; the SFPUC would release or bypass very little water during these periods.

Regarding the first point, the EIR (Vol. 1, Sections 4.5 and 4.6, and Vol. 3, Appendices D and J) provides detailed information on existing hydrologic conditions and simulated (modeled) effects of the Draft EIR project on hydrology and associated aquatic habitat conditions. Similar information is provided for the CDRP Variant in Chapter 9 of this Response to Comments document.

The second point, regarding effects of flow schedules on other anadromous fish species, is addressed in master response Section 10.4, Fisheries, specifically Section 10.4.6, Other Anadromous Fish Species in Alameda Creek.

Regarding the third point, the role of natural flow in meeting flow targets, please see Response O-ACA&CBD1-03. Also see the master response presented in Section 10.3, Hydrology, and specifically Section 10.3.3, Diversions and Streamflow, under "Releases from Calaveras Dam and the ACDD."

O-ACA&CBD1-36 The comment states that the SFPUC only used data from 2000 onward when analyzing the effects of the CDRP on flows in Alameda Creek, and uses monthly average stream flows rather than daily stream flows, which is indicated as inadequate for evaluating impacts on fisheries.

These statements are incorrect. The analysis of the effects of the CDRP on flow in Alameda Creek relied on simulations made using the SFPUC's HH/LSM, which uses hydrologic data from the 82-year period between 1920 and 2002. Monthly data produced by HH/LSM was used together with data from a 15-minute model to evaluate the effects of the project on streamflow and aquatic resources. The 15-minute model was developed using data from a USGS stream gage. For more information, please see the master response presented in Section 10.3, Hydrology, specifically Section 10.3.2, Hydrologic Modeling.

O-ACA&CBD1-37 The comment states that the CDRP would increase diversions from Alameda Creek, which would require an appropriative water right from the State Water Resources Control Board (SWRCB), and that the EIR should therefore address the availability of un-appropriated water in Alameda Creek consistent with SWRCB guidance.

The CDRP would restore the former storage capacity of Calaveras Reservoir under the existing pre-1914 appropriative water right owned by the City and County of San Francisco (CCSF) for Calaveras Reservoir and the ACDD. The CDRP would not increase diversions from Alameda Creek in an amount greater than volumes directly diverted and stored under this water right. In fact, the CDRP would reduce the SFPUC's diversions from the Alameda Creek watershed compared to both the existing (post-DSOD-restricted) condition and 2001 (pre-DSOD-restricted) conditions.

As described in the EIR, the greater diversions of water enabled by the restoration of capacity in Calaveras Reservoir under the Draft EIR project would be more than offset by the amount of water that the SFPUC would bypass at the ACDD or release from Calaveras Reservoir to benefit native fishes. The SFPUC does not make any designated bypasses or releases from its dams in the Alameda Creek watershed to benefit native fishes. With the Draft EIR project, the SFPUC would do so. Consequently, the SFPUC's average annual diversion of water from the Alameda Creek watershed with the Draft EIR project would be less than its average annual diversions prior to 2001.

Note that average annual diversions with the CDRP Variant would be less than average annual diversions prior to 2001 and less than average annual diversions with the Draft EIR project. The SWRCB procedures and flow impairment methodology described in the comment relate to applications for new water rights. Because the CDRP would not increase diversions from Alameda Creek in an amount greater than volumes directly diverted and stored under the CCSF's pre-1914 water right, the SWRCB process is not applicable; implementation of the CDRP does not require a new water right.

O-ACA&CBD1-38 The comment states that the impact evaluation in the Draft EIR does not employ a cumulative flow impairment methodology, and that the analysis therefore fails to determine whether there is sufficient water available to maintain public trust values. In addition, the comment states that the EIR should mention the fact that the SWRCB estimated the Alameda Creek watershed to be 72 percent impaired, and that the Department of Water Resources (DWR) concluded the watershed is fully appropriated and no further diversions would be considered.

As discussed in Response O-ACA&CBD1-37, an assessment of stream flow using the cumulative flow impairment methodology for the CDRP is not warranted. Regarding the statements about the SWRCB and DWR, the SWRCB makes determinations that streams are fully appropriated in periodic water-right orders. The last such determination, DWR Order

98-08 (dated November 19, 1998), does not list Alameda Creek as fully appropriated. Even if Alameda Creek were so listed, the effect of listing simply prohibits *new* applications for water rights, whereas the project seeks to continue the exercise of *existing* pre-1914 appropriative water rights owned by the CCSF. The DWR does not make determinations that streams are fully appropriated.

For information on the SFPUC's use of water from the Alameda Creek watershed, please also see master response presented in Section 10.3, Hydrology, specifically Section 10.3.3, Diversions and Streamflow, under "SFPUC's Total Annual Diversions from the Alameda Creek Watershed."

O-ACA&CBD1-39 The comment references a description of the 1997 MOU flows and states that these are flow schedules the SFPUC committed to in the 1997 MOU but has not yet implemented.

The comment is correct: the 1997 MOU flows have not been implemented. As stated in the EIR (Vol. 1, Chapter 3, page 3-20), the 2001 DSOD limitation on reservoir elevations has substantially reduced usage storage and limited the cold-water pool in the reservoir, and the recapture facility has not been constructed; consequently, SFPUC has not implemented the 1997 MOU releases.

O-ACA&CBD1-40 The comment accurately notes that the water necessary to meet the flow schedules for resident trout and steelhead that are part of the Draft EIR project would comprise both natural flow and releases from the SFPUC's reservoirs. Only some of the water needed to meet the schedules would be captured and used by the SFPUC if the flow schedules did not exist. The comment states that the proposed flow schedules may be met by natural runoff rather than releases during normal and wet years, and that, in these years, the SFPUC would not be required to contribute meaningful flows from the largest subwatershed, Calaveras Creek, which it completely impounds. For more information on the role of natural flow in meeting flow schedules for native fish, please see Response O-ACA&CBD1-03 and Section 10.3.3, Diversions and Streamflow, specifically the subsection entitled "Fishery Releases from Calaveras Dam and the ACDD." That section of the master response also addresses this comment with respect to the flow schedules proposed under the CDRP Variant. For information on the proportion of flow from the

Calaveras Creek watershed that is impounded by the SFPUC, please see Section 10.3.3, Diversions and Streamflow, and specifically the subsection entitled "SFPUC's Total Annual Diversions from the Alameda Creek Watershed."

O-ACA&CBD1-41 The comment accurately notes the flow schedules for steelhead presented in the Draft EIR, and then states that because the 1997 MOU flows should be considered as a baseline condition rather than as mitigation, mitigation for the CDRP would be the proposed flows minus the 1997 MOU flows.

The 1997 MOU flows are part of the Draft EIR project and are not treated as mitigation in the EIR. Refer to the master response presented in Section 10.2, Baseline Used in the Environmental Analysis, and specifically to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) Between the San Francisco Public Utilities Commission (SFPUC) and California Department of Fish and Game (CDFG), and Unimpaired Flows. For more information on flow releases and bypasses during different hydrologic years, please see Response O-ACA&CBD1-03 and Section 10.3.3, Diversions and Streamflow, specifically the subsection entitled "Fishery Releases from Calaveras Dam and the ACDD."

O-ACA&CBD1-42 The comment states that the proposed steelhead flows are based on the 1997 MOU, an agreement designed to create a tail-water resident rainbow trout fishery in a stream reach below the dam, not to benefit migratory steelhead, and that the proposed flow schedules neglect to address: (a) adequate stream flows for adult steelhead attraction and upstream passage following storms; (b) periodic high flow events that maintain channel form, geometry, and other geomorphic functions; or (c) adequate streamflows during and following storms for smolt outmigration in Alameda Creek. The comment also states that the flows may be entirely recaptured downstream at the recapture facility; do not address potential Chinook salmon migration or spawning; and do not mimic the natural hydrograph of the stream.

The EIR describes the Draft EIR project flow release schedules proposed for steelhead (Vol. 1, Chapter 3, Section 3.6.6, pages 3-69 and 3-70) and as discussed in Response O-ACA&CBD1-34 analyzes the potential effects on steelhead (Vol. 2, Chapter 6, Section 6.2.3.3, pages 6-23 – 6-32, and Vol. 3, Appendix J). Vol. 1, Sections 4.5 and 4.6, discuss potential effects on channel form, geometry, and other geomorphic functions. The flow schedules for the CDRP Variant are presented in Chapter 9, Section 9.2.5, Variant Operations. Please also refer to Sections 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; and 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding issues related to project effects on steelhead, monitoring and adaptive management, and the recapture facility (Upper Alameda Creek Filter Gallery Project). Please refer to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for a discussion of Chinook salmon. Please refer to Response O-Acterra et al.-16 regarding the potential for proposed flows to mimic the natural hydrograph of the stream.

O-ACA&CBD1-43 The comment references a mitigation measure for effects on flows and fisheries related to operation of the ACDD, and states that the measure defers mitigation for up to 10 years and does not provide criteria to determine if an impact is taking place.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments that raise concern that the timing for adaptive management is too long for meaningful response.

Regarding the statement that the measure does not provide criteria to determine if an impact is taking place, refer to the 1997 MOU for details on monitoring and adaptive management, which include performance criteria for monitoring parameters (see Vol. 3, Appendix H).

Regarding the CDRP Variant, because of the beneficial effects associated with the fish screen at the diversion tunnel, the reduced diversion capacity and period of diversion, and AMIP, Mitigation Measure 5.5.5a (requiring the SFPUC to develop and implement a monitoring program to ensure that the proposed flow releases are sufficient to sustain the resident trout population in Alameda Creek downstream of the ACDD) and Mitigation Measure 5.5.5b (requiring the SFPUC to implement adaptive management measures including additional flow releases, seasonal restrictions on operation of the ACDD, or installation of a fish screen at the diversion tunnel) would no longer be needed. Consequently, these mitigation measures would not apply to the CDRP Variant. (Refer to Chapter 9 for a description of the Variant and analysis of its environmental impacts.)

O-ACA&CBD1-44 This comment reprises issues raised in Comment O-ACA&CBD1-03, Comment O-ACA&CBD1-35 and Comment O-ACA&CBD1-40; please see Response O-ACA&CBD1-03 and Section 10.3.3, Diversions and Streamflow, specifically the subsection entitled "Releases from Calaveras Dam and the ACDD."

O-ACA&CBD1-45 The comment references comments made by CDFG in its November 22, 2005 scoping comments on the PEIR for the WSIP.

Please refer to responses to comment letter A-CDFG, and specifically to Response A-CDFG-02, regarding issues raised in the November 22, 2005 letter. Please also refer to the master responses presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding issues related to these topics.

O-ACA&CBD1-46 The comment states the following: that the CDRP proposes to operate the ACDD to divert almost all of the late fall, winter, and spring streamflows from upper Alameda Creek; that the EIR acknowledges that this operational scheme would nearly eliminate the low and moderate (1 to 650 cfs) flows in Alameda Creek downstream of the diversion dam that currently occur when the diversion gates are closed and would substantially reduce many higher (greater than 650 cfs) flows; that the EIR categorizes this as a significant and unavoidable impact; and that the commenter concurs that the impact would be significant. The commenter states that the impact is clearly avoidable if the SFPUC removes the diversion dam or operates it in a lawful manner that protects fish and wildlife downstream of the dam.

The comment is incorrect. The EIR does not conclude that there would be significant and unavoidable impacts associated with operation of the

ACDD. Please refer to Vol. 1, Sections 4.4, 4.5, and 4.6; and Vol. 2, Chapter 5 of the EIR for impact discussions and mitigation measures related to diversions and operation of the ACDD.

As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised instream flow schedules, installation of a fish screen at the upstream end of the diversion tunnel at the ACDD, and construction of a fish ladder around the ACDD. Refer to Chapter 9 for more information on the Variant and its environmental impacts. Similar to the Draft EIR project and discussed in Section 9.3.6, the Variant would result in a less-than-significant impact on hydrology.

O-ACA&CBD1-47 The comment states that the proposed operation of the diversion dam would be to divert all but 1 cfs of flow when the gates are open to a flow of 650 cfs, and that diverting the entire streamflow (except 1 cfs) and cutting the frequency of peak flows during December through May will clearly affect downstream fish passage, fish rearing, amphibian populations, and stream temperatures. The comment also states that the SFPUC has bypassed most flows past the diversion dam since 2002, and trout and aquatic resources below the diversion dam are dependent upon these natural streamflows.

The comment is incorrect. The Draft EIR project proposes to make minimum bypass flows at the ACDD whenever those flows are naturally present (see Vol. 1, Chapter 3, pages 3-66 – 3-69). Please also see Vol. 1, Sections 4.4, 4.5, and 4.6 for a discussion on the analysis of potential flow-related effects that could result from the proposed Draft EIR project flow schedule. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a detailed description of the flow schedules. Please also refer to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and specifically to the sub-section entitled "Flow-related Effects on Fish and Habitat Conditions" for a response to the comment that the SFPUC "has bypassed most flows past the diversion dam since 2002," which apparently refers to operations after DSOD restrictions were imposed in 2001, and that trout and aquatic resources below the diversion dam are dependent upon these natural streamflows.

Note that fishery enhancements proposed as part of the CDRP Variant would reduce the maximum flow diversion capacity at that location from approximately 650 cfs to 370 cfs. Refer to Chapter 9 for more information.

O-ACA&CBD1-48 The comment states the following:

- The Draft EIR acknowledges that the CDRP would continue to exclude steelhead from Alameda Creek upstream from ACDD, but does not list corresponding conservation measures.
- The Draft EIR acknowledges operational effects (substantially reduced or no-flow conditions downstream) on Alameda Creek between the Calaveras Creek confluence and ACDD, but fails to provide conservation measures.
- The Draft EIR acknowledges that the proposed operation of the ACDD would result in significant change in hydrologic conditions in Alameda Creek downstream of the ACDD. The comment then presents the following text in quotation marks: "Diversion of most or all flows during the late winter and spring months could adversely affect the ability of resident rainbow trout to spawn and for eggs to successfully incubate in this reach"

The comment's implication, that the Draft EIR identified significant impacts related to fish passage at the ACDD but did not identify measures to mitigate the impacts on fisheries in Alameda Creek downstream of the ACDD to a less-than-significant level, is incorrect. The EIR (Vol. 1, Chapter 4, Section 4.5.2.3, Impact 4.5.3, page 4.5-56) analyzes the effects of the Draft EIR project with respect to creating barriers to fish movement/migration. Please refer to the master response presented in Section 10.4, Fisheries, Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and specifically to the subsections entitled "Fish Passage at ACDD" and "Flow-Related Effects on Fish and Habitat Conditions." Please also refer to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for responses to comments on this topic and issues related to operational effects on Alameda Creek between the Calaveras Creek confluence and the ACDD. The portion of the comment stating that the project would result in substantially reduced or no-flow conditions in Alameda Creek downstream is also incorrect; please see Response O-ACA&CBD1-47 and to the master response presented in Section 10.3, Hydrology, Section 10.3.3, Diversions and Streamflow.

The CDRP EIR (Vol. 1, Chapter 4, Section 4.5, Impacts 4.5.5 and 4.5.6, pages 4.5-60 – 4.5-76) evaluates project operations (including the original proposed flow schedules) on trout spawning and rearing. Under the Draft EIR project, the proposed bypass flows would ensure that the flows in Alameda Creek downstream of the ACDD would either be increased or remain unchanged from existing conditions for purposes of supplying adequate fish spawning habitat for resident rainbow trout. As indicated by the analysis, Impact 4.5.5 (Effects on native fish in Alameda Creek from the ACDD downstream to the confluence with Calaveras Creek) would be less than significant with implementation of Mitigation Measures 5.5.5a (Resident Rainbow Trout Monitoring) and 5.5.5b (Resident Rainbow Trout Adaptive Management). Impact 4.5.6 (Effects on native fish in Calaveras Creek below Calaveras Dam and in Alameda Creek downstream of the confluence with Calaveras Creek in the primary study area) is less than significant without mitigation. For impacts on fisheries under the Variant, which would include the revised instream flow schedules on Alameda and Calaveras Creeks, please refer to Section 9.3.5. For discussion of hydrological impacts on Alameda Creek downstream of the ACDD due to operations under the Draft EIR project and the CDRP Variant, please see EIR Impact 4.6.5 (pages 4.6-75 – 4.6-87) and Section 9.3.6 of this Comment and Responses document, respectively.

Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows as Part of the Draft EIR Project and Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of flows.

Note that under the CDRP Variant, because of the beneficial effects associated with the fish screen at the diversion tunnel, the reduced diversion capacity and period of diversion, and AMIP, Mitigation Measures 5.5.5a and 5.5.5b would not be needed.

O-ACA&CBD1-49 The comment states that the Draft EIR proposes mitigation for the operation of the ACDD (i.e., that the SFPUC establish and implement written operational criteria directing that the diversion dam and tunnel shall be operated to pass flows down Alameda Creek when diversion of those flows is not required to maintain desired levels in Calaveras

Reservoir). The commenter states that the mitigation measure is not adequate.

The comment is incorrect. The comment cites Mitigation Measure 5.4.1-2 from the WSIP PEIR. This measure is not included as mitigation measure in the CDRP EIR, but instead is proposed as part of the Draft EIR project (see Vol. 1, Chapter 3, Section 3.6.4, page 3-66). The commenter's characterization of the proposed ACDD operational criteria as "essentially promising to not divert the remainder of the stream flows that are not diverted" is inaccurate. The proposed operational criteria would reduce diversions from Alameda Creek at the ACDD compared to pre-DSOD operations, during which time the gates at the diversion tunnel remained open throughout the rainy season irrespective of the reservoir storage level. Please refer to the master response presented in Section 10.4, Fisheries, specifically Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments on topics related to the operational effects of the ACDD on downstream resources.

As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules and installation of a fish screen at the upstream end of the diversion tunnel at the ACDD, which would reduce the maximum flow diversion capacity at that location from approximately 650 cfs to 370 cfs. Under the Variant, these fishery enhancements would replace the operational criteria for the ACDD that is included in the Draft EIR project. Refer to Chapter 9 for more information.

O-ACA&CBD1-50 The comment references a mitigation measure related to maintaining minimum flows for resident trout in Alameda Creek below the ACDD, and states that the measure is inadequate because it defers mitigation for up to 10 years and does not address issues related to the California Fish and Game Code (fish screens, passage, and flows).

The comment references a mitigation measure that appears to be from the WSIP PEIR. Refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a clear description of proposed flow schedules. Please refer to Section 10.4.5, Current and

Proposed Operations of the ACDD and Calaveras Dam, and specifically to the subsection entitled "Timeline for Monitoring and Adaptive Management" for responses to comments raising concern that the timing for adaptive management outlined in the mitigation measure is too long for meaningful response. Please also refer to Section 10.4.5, and specifically to the subsection entitled "Compliance with the Fish and Game Code" for responses to comments related to Fish and Game Code issues.

Under the CDRP Variant, because of the beneficial effects associated with the revised instream flow schedules, the fish screen at the diversion tunnel, the reduced diversion capacity, and the AMIP, Mitigation Measure 5.5.5a (requiring the SFPUC to develop and implement a monitoring program to ensure that the proposed flow releases are sufficient to sustain the resident trout population in Alameda Creek downstream of the ACDD) and Mitigation Measure 5.5.5b (requiring the SFPUC to implement adaptive management measures including additional flow releases, seasonal restrictions on operation of the ACDD, or installation of a fish screen at the diversion tunnel) would not be needed. Consequently, these mitigation measures would not apply to the CDRP Variant. Refer to Chapter 9 for a description of the Variant and analysis of its environmental impacts.

O-ACA&CBD1-51 The comment states that the Fish and Game Code and FESA require passage at the ACDD and screening of the diversion tunnel. The comment also states that the EIR should discuss the impacts of proposed ACDD operations on fish passage at Little Yosemite and other locations downstream of the ACDD.

The EIR analyzes project effects related to creating barriers to fish movement and migration (see Vol. 1, Chapter 4, Section 4.5.2.3, page 4.5-56) and analyzes the effects of the project on fisheries and habitat downstream of the ACDD (Vol. 2, Chapter 4, Section 4.5.2.3, pages 4.5-60 – 4.5-70). Chapter 6 analyzes cumulative impacts on fisheries and aquatic habitats in the Alameda Creek watershed. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for a discussion on passage issues, entrainment at the ACDD, and Fish and Game Code compliance, and to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion on effects on steelhead and the SFPUC's proposed monitoring and adaptive management strategy to address uncertainties. Refer to Response O-ACA&CBD1-23 for a discussion of passage at Little Yosemite, and the discussion in Chapter 9, Section 9.5, Cumulative Impacts of the CDRP Variant, regarding the addition of a sub-project under the CDRP AMIP to improve passage conditions through the Little Yosemite reach of Alameda Creek.

O-ACA&CBD1-52 The comment states that the EIR should evaluate the potential implications of removing the ACDD, providing fish screens at the diversion tunnel, providing bypass flows, and providing a fish ladder. The comment also states that these additional features should be evaluated prior to the USACE's issuing a permit for the CDRP to ensure that future actions to restore steelhead in Alameda Creek are not limited or precluded.

Removal of the ACDD, an existing facility currently used as part of existing Calaveras Dam operations, would not be feasible as part of the proposed CDRP since doing so would not accomplish the primary project objectives to re-establish water delivery reliability, and restore water supply and capacity of the reservoir as discussed in the EIR (Vol. 1, Chapter 3, Section 3.2.2, page 3-6). The ACDD allows for the diversion of flows (via the diversion tunnel) from upper Alameda Creek to Calaveras Reservoir, thereby increasing local water storage and local water yield of the Calaveras Reservoir. Without the ACDD, the CDRP would restrict the SFPUC's ability to achieve the WSIP Level of Service objectives with respect to regional water supply during planned and unplanned interruptions of the SFPUC Hetch Hetchy System and during periods of drought, as well as enhanced water delivery reliability.

The Draft EIR project includes bypass flows for fish on Alameda Creek below the ACDD and flow release consistent with the 1997 MOU California Department of Fish and Game; refer to EIR pages 3-66 – 3-70 (Vol. 1, Chapter 3, Sections 3.6.4, 3.6.5, and 3.6.6), and the flow analysis in Impact 4.6-5 on EIR pages 4.6-76 – 4.6-87 (Vol. 1, Chapter 4, Section 4.6.2.3). The EIR addresses additional flow releases to support steelhead in Section 3.6.6, (Vol. 1, Chapter 3, pages 3-69 – 3-70), Section 6.2.3.3 (Vol. 2, Chapter 6, pages 6-23 – 6-32), and Appendix J (Vol. 3). EIR Chapter 7, Alternatives, considers a range of reasonable alternatives to the CDRP consistent with CEQA requirements. The alternatives that are considered address strategies or major design modifications that would avoid or minimize significant environmental effects of the CDRP; they do not include select project elements that could be added to the CDRP. Because the EIR analysis concludes that operation of the ACDD would not result in adverse project impacts on downstream fisheries or flow conditions, an alternative that includes removing the ACDD would not serve the purpose of the CEQA alternatives analysis to reduce or eliminate significant impacts of the CDRP and is therefore not warranted.

As noted above, since publication of the Draft EIR the SFPUC developed the CDRP Variant, which includes features to enhance fishery resources and other project updates. The CDRP Variant includes a fish screen at the ACDD diversion tunnel and fish ladder to allow fish passage at ACDD mentioned in this comment, as well as proposed instream flow schedules that replace the flow schedules for resident trout and steelhead that are part of the Draft EIR project. Refer to Chapter 9, of this Comments and Responses document for a more detailed description of the CDRP Variant and its environmental impacts. The Variant resulted in part from the SFPUC's ongoing coordination with resource agencies, including the USACE.

O-ACA&CBD1-53 The comment states that the project will have a significant negative impact on winter and spring flows, that flows will be inadequate for steelhead migration, and that it is inappropriate to measure the adequacy of overall migration conditions based on criteria developed for passing individual riffles. The comment also states that the Draft EIR claims less than significant or no impacts on fisheries and hydrology based on unsubstantiated claims such as "proposed CDRP flows would constitute an improvement over existing conditions," and that the changes in annual flows are not an acceptable metric for measuring impacts on hydrology and fisheries.

The commenter has expressed an opinion regarding impacts, but has presented no evidence or analysis to refute the substantial evidence presented and relied upon in the Draft EIR. The proposed minimum flow schedules for the Draft EIR project are described on EIR pages 3-66 – 3-69 (Vol. 1, Chapter 3, Sections 3.6.4 through 3.6.6); project operations are analyzed on EIR pages 4.5-78 – 4.5-80 (in Vol. 1, Chapter 4, Section 4.5.2.3), EIR pages 6-23 – 6-32 (Vol. 2, Chapter 6, Section

6.2.3.3), and in Vol. 3, Appendix J. The analysis of potential operational effects on fish migration included consideration of a number of different factors/metrics in addition to passing individual riffles and/or changes in annual flows. Other factors that were considered in the analysis include: a review and analysis of historical daily average, daily maximum, and 15-minute flow data (for example, see Appendix J, pages 21 – 27, 30 – 32, and Figures 4.2, 4.3, and 4.5); and the fact that the original proposed flow schedules represent only minimum flows and actual flows would be much higher during times when rainfall is occurring. Please also see the master response presented in Section 10.4, Fisheries, specifically Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead.

Note that with the CDRP Variant, impacts to native fish are considered beneficial (i.e., an improvement over the existing condition) due to fishery enhancements that would be implemented under the Variant. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis (including cumulative) of the CDRP Variant.

O-ACA&CBD1-54 The comment states that the EIR should include fishery protection plans requested by the CDFG to preserve the existing reservoir population of steelhead trout during pre- and post-construction operations, a plan to screen the new adits, a plan to provide passage at the ACDD and Calaveras Dam, and consideration of minimum flows from San Antonio Reservoir.

As described in the EIR (Impact 4.5.4, pages 4.5-57 – 4.5-60, in Vol. 1, Chapter 4, Section 4.5), construction impacts on fishery resources in Calaveras Reservoir would be mitigated to less than significant with implementation of Mitigation Measure 5.7.1 (Storm Water Pollution Prevention Plan). Please also refer to the master response presented in Section 10.4 Fisheries, and specifically to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, regarding operations of Calaveras Reservoir during the construction period and supplemental clarification of Mitigation Measure 5.7.1 to ensure protection of fishery resources in the reservoir during construction. Operational impacts on fishery resources in the reservoir are described in Impact 4.5.7 (pages 4.5-76 – 4.5-78), which determined that the increased cold water pool and improved water quality conditions would benefit fish species in the reservoir, and that fish mortality through entrainment in outlet structures is not expected to increase from existing conditions. Therefore, no mitigation is required for post-construction operations.

Refer to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments on passage issues. Regarding consideration of releases from San Antonio Reservoir, refer to Response O-ACA&CBD1-21.

Regarding the suggestion that the SFPUC consult with CDFG about a plan to protect the reservoir trout population during construction, please note that the SFPUC is currently consulting with CDFG in accordance with that agency's authority under the Fish and Game Code, specifically Section 1602, regarding Lake and Streambed Alteration Agreement. Refer to EIR Vol. 1, Chapter 3, Section 3.7, page 3-72, for a description of this discretionary approval.

As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which incorporates several of the fishery enhancements mentioned in this comment, including fish screens on Adits #1 and #2; refer to Chapter 9 for additional information.

O-ACA&CBD1-55 The comment makes the following points:

- It is impossible to assess CDRP effects without considering the recapture facility operations.
- The 1997 MOU was not implemented pending implementation of the recapture facility, "implying that implementation of proposed flow schedules continue to be tied to recapture facility development." SFPUC policy and the EIR must decouple flow releases from the recapture facility to "allow for a reasonable understanding of CDRP effects and mitigation." Impacts of the recapture facility must be addressed in the CDRP EIR.
- A recapture facility would undermine potential benefits of proposed flows, a potential significant impact on steelhead.

Regarding the first point, please refer to the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.2, Hydrologic Modeling, under the sub-section entitled "Flow in Alameda Creek Downstream of Arroyo de la Laguna." As discussed in this section, the EIR analyses for hydrology and fisheries assume implementation of the recapture facility, now known as the Upper Alameda Creek Filter Gallery Project. As stated in Section 10.3.2, including the effects of the filter gallery in the analysis of CDRP effects on flow in Alameda Creek represents a worst-case condition with respect to impacts on streamflow since the filter gallery project would recapture some of the flows released from Calaveras Dam and the ACDD and convey them to the SFPUC regional water system. Please also see Section 10.3.6, Cumulative Impacts, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for further discussion of the filter gallery project.

Regarding the second point, refer to Response A-ACWD-02, which states that the SFPUC would implement CDRP flow schedules for fisheries upon completion of project construction, regardless of implementation of the filter gallery project, and that response also addresses the assertion that the impacts of the filter gallery project must be included in the CDRP EIR.

Regarding the third point, the EIR (Vol. 2, pages 6-23 – 6-32, and Vol. 3, Appendix J) describes the analyses conducted to determine the potential project effects on steelhead. With respect to the CDRP Variant, this analysis can be found in Chapter 9, Section 9.5.2. Please also refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding issues related to project effects on steelhead, monitoring and adaptive management, and the Upper Alameda Creek Filter Gallery Project.

O-ACA&CBD1-56 The comment asserts that the Draft EIR's GHG analysis is based on the flawed assumption that seemingly small contributions of GHG emissions do not have a cumulative impact on global warming.

Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section 10.5.2, Construction GHG Emissions Impacts and Mitigation, regarding the analysis and impact conclusions for GHG emissions as presented in the EIR. An analysis of the GHG emissions associated with the CDRP Variant is presented in Chapter 9, Section 9.3, Environmental Effects of the CDRP Variant, of this Comments and Responses document.

O-ACA&CBD1-57 The comment asserts that the Draft EIR incorrectly reasons that the proposed project's cumulative construction and operational impact related to GHG emissions is less than significant. The comment also supports a net-zero threshold for GHG emissions as the most scientifically supportable threshold to stabilize the climate.

Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section10.5.2, Construction GHG Emissions Impacts and Mitigation, regarding the appropriateness of the significance thresholds for GHG emissions used in the EIR, as well as for a discussion of why a net-zero threshold was not used in the EIR. An analysis of the GHG emissions associated with the CDRP Variant, which assumes the same significance thresholds assumed for the Draft EIR project, is presented in Chapter 9 of this Comments and Responses document.

O-ACA&CBD1-58 The comment describes the inertia in the climate system and states that any new source of GHG emissions cannot be considered innocuous. The comment also states that regardless of whether an established threshold of significance has been met, an argument can be made that any increase in GHG emissions has a cumulatively significant impact on the environment. The comment asserts that GHG impacts of the CDRP are cumulatively significant, and that all feasible mitigation and alternatives to reduce project emissions should be adopted.

As discussed in the EIR (Volume 2, p. 4.13-43), *operation* of the project would not result in an increase in GHG emissions; the EIR analysis focuses on construction-phase GHG emissions. Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section 10.5.2, Construction GHG Emissions Impacts and Mitigation, for discussion regarding the appropriateness of the significance thresholds for GHG emissions used in the EIR, as well as the adequacy of the measures to mitigate construction-phase GHG emissions.

An analysis of the GHG emissions associated with the CDRP Variant is presented in Chapter 9, Section 9.3, of this Comments and Responses document.

O-ACA&CBD1-59 The comment states that the SFPUC should be leading the way in GHG reduction measures and mitigation for GHG impacts for its projects.

Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section 10.5.2, Construction GHG Emissions Impacts and Mitigation, regarding the adequacy of measures to mitigate construction-phase GHG emissions and the SFPUC's obligations under CEQA. Please see EIR Vol. 2, Chapter 4, Section 4.13.1.2, pages 4.13-27 – 4.13-30 regarding GHG reduction measures being implemented by the CCSF. In addition, the analysis of the GHG emissions associated with the CDRP Variant is presented in Chapter 9, Section 9.3, of this Comments and Responses document.

O-ACA&CBD1-60 The comment implies that the Draft EIR incorrectly describes thresholds of significance for construction-related air quality impacts, and that the CDRP would likely exceed the recommended daily and annual GHG threshold.

Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section 10.5.2, Construction GHG Emissions Impacts and Mitigation, regarding the appropriateness of the significance thresholds for GHG emissions used in the EIR. The analysis of the GHG emissions associated with the CDRP Variant is presented in Chapter 9, Section 9.3, of this Comments and Responses document.

O-ACA&CBD1-61 The comment asserts that the EIR should include full mitigation for all carbon-dioxide-equivalent GHG emissions produced during construction and operation, such as through the purchase of offsets for 100 percent of the emissions from a fund or project certified by the California Climate Action Registry.

Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section 10.5.2, Construction GHG Emissions Impacts and Mitigation, regarding the requirement of measures to mitigate construction-phase GHG emissions, as well as for a discussion of the use of GHG emission offsets as mitigation. The discussion of requirements for measures to mitigate construction-phase emissions would also apply to the CDRP Variant's construction-phase GHG emissions. The analysis of the CDRP Variant's environmental impacts is presented in Chapter 9, Section 9.3, of this Comments and Responses document.

O-ACA&CBD1-62 The commenter expresses the opinion that the use of "public SFPUC land" to compensate for impacts on the habitat of listed species is inappropriate because these lands are already owned by the SFPUC, and are under no threat of development. The comment states that these lands "presumably are being managed in accordance with SFPUC's Environmental Stewardship Policy" and, if these lands are not being managed in this manner, then "using these lands as mitigation banks . . . contributes no net benefit to special-status species."

The mitigation lands identified for the CDRP were identified pursuant to the conservation principles set forth on EIR page 6-22 (Vol. 2, Chapter 6, Section 6.2.3.2); these principles take into consideration factors such as whether the parcel is contiguous with other areas of relatively undisturbed habitat as well as wildlife movement among mitigation lands. The EIR text describes the benefits associated with locating mitigation lands within the SFPUC Alameda Watershed (page 6-23). As described in Response O-ACA1-06, lands within the Alameda Watershed have been used for a variety of purposes that adversely affect habitat quality. The conservation easements or other legally binding instruments that are required to be put into effect by the provisions of Mitigation Measure 5.4.3c will ensure long-term protection of mitigation lands. Pursuant to Mitigation Measure 5.4.3 (Vol. 2, Chapter 5, Section 5.4), SFPUC will be required to assure that mitigation lands are managed differently from other SFPUC-owned watershed lands and provide specific habitat improvement benefits. For example, the types of activities that would occur on mitigation lands and that would be required to be protected in perpetuity include establishment and enhancement of wetlands, intermittent streams, oak riparian forest, and perennial grasslands that support special-status species such as California red-legged frog and California tiger salamander. Consistent with CEQA, implementation of Mitigation Measure 5.4.3 along with other mitigation measures proposed in the EIR would reduce impacts on special-status species and sensitive habitats to a less-than-significant level by providing for permanent compensation for habitat loss associated with the CDRP. See Response O-ACA1-06 for additional information.

O-ACA&CBD1-63 The comment states that habitat restoration, invasive plant removal, management changes, and/or species reintroduction on disturbed SFPUC lands should be "done under the auspices of the SFPUC Watershed and Environmental Improvement Program (WEIP)" and "not used as mitigation for construction impacts of SFPUC projects."

Regarding the appropriateness of using SFPUC watershed lands for habitat restoration, refer to Responses O-ACA1-06 and O-ACA&CBD1-62. Consistent with CEQA, implementation of Mitigation Measure 5.4.3 along with other mitigation measures proposed in the EIR would reduce impacts on special-status species and sensitive habitats to a less-than-significant level by compensating for habitat loss associated with the CDRP project. Implementation of Mitigation Measure 5.4.3 would require the SFPUC to specify compensation ratios for all habitat types and to develop success criteria such as those described in Response O-ACA&CBD1-64, below. As described in the WSIP PEIR (PEIR Vol. 1, Chapter 3, page 3-83), the SFPUC is coordinating the projects and activities of the WEIP with the WSIP projects and associated mitigation measures.

O-ACA&CBD1-64 The comment states that the EIR does not specify compensation ratios for direct impacts on loss of habitat for special-status species but rather defers quantification of mitigation to a "nebulous decision-making process" that is based on undefined success criteria. The comment also states that compensation should consist of protecting privately owned lands with habitat value that are under the threat of development and that higher mitigation ratios for "already protected areas" [i.e., SFPUC watershed lands] should be used. Lastly, the commenter requests that if degraded public lands are used as mitigation, the EIR should describe how the SFPUC would ensure mitigation lands will be managed and funded in perpetuity.

The commenter is correct that specific mitigation ratios are not provided. CEQA does not specify that ratios for habitat compensation be disclosed in an EIR; rather, CEQA establishes general standards for development and implementation of mitigation measures. Mitigation Measure 5.4.3e does not prescribe specific mitigation ratios but instead requires that the final habitat compensation plans ensure no net loss of habitat areas, functions, and services and identifies the factors that will be used to determine compensation ratios on page 5-12 (Vol. 2, Section 5.4). These factors include the likelihood of success; differences between the habitat functions and services lost and those expected to be provided by the compensation; temporal losses of resource functions and services; and the distances between the affected habitat and compensation sites. Thus, the final compensation acreages will be determined in consultation with the permitting agencies but the mitigation requires the final selected acreages to satisfy the identified factors. Contrary to an assertion in the comment, the EIR requires that success criteria be ecologically based (page 5-13). Further, in response to this comment, Mitigation Measure 5.4.3h is revised to clarify the requirements for the success criteria and to include example success criteria that could feasibly satisfy the mitigation requirement; these success criteria may be included in the final compensation plan(s) or the permitting agencies may approve alternative but comparable or additional success criteria, as follows:

> The final compensation plan(s) shall include ecologically based criteria that will be used to determine whether the compensation projects are achieving their objectives. The success criteria shall be ~~based on attributes that are objective and verifiable.~~ assessed by comparing performance during the monitoring period against objective and verifiable, ecologically-based success criteria which reflect the Goals and Objectives of the site. The type of language that will be included in the final MMPs under success criteria are described below. The final success criteria shall provide additional detail and specificity as needed to determine whether compensation objectives are achieved in accordance with resource agency permitting requirements.
>
> For example, success criteria may include, but are not limited to these requirements:
>
> - Absolute vegetation cover of each established wetland feature shall comprise at least 70 percent by year 5.
> - Absolute cover of target invasive plant species shall not exceed 5 percent total cover by year 5.
> - Survival of planted oaks shall be at least 30 percent by year 10.
> - Planted vegetation will be fully established (i.e., not require irrigation and be self sustaining) at the end of the monitoring period.

See also Responses O-ACA1-06, A-ACPWA-01 and O-CNPS1-06 for further discussion on mitigation ratios.

Regarding use of lands managed by the SFPUC for compensation, refer to Responses O-ACA1-06 and O-ACA&CBD1-62. Regarding the last bullet, the EIR requires that the final compensation plan include a description of long-term management and financing, and a description of financial assurances that will be provided (EIR page 5-13). Mitigation under this project includes funding to implement habitat improvements, long-term maintenance, and preservation. Implementation of Mitigation Measure 5.4.3, along with other mitigation measures proposed in the EIR would reduce identified impacts on special-status species and sensitive habitats to a less-than-significant level by compensating for habitat loss associated with the project.

O-ACA&CBD1-65 The comment faults the EIR for deferring implementation of flow schedules for steelhead until NMFS notifies the SFPUC of the presence of steelhead when (the commenter asserts) recovery of steelhead in the watershed depends on the flows to be implemented concurrently with the project.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, regarding the timing of implementation of the proposed flow schedules for steelhead.

O-ACA&CBD1-66 The comment references the EIR and states that the SFPUC will develop a Habitat Conservation Plan (HCP), which will be the primary plan for coordinating operations and steelhead restoration in the watershed. The comment states that the ACDD and Calaveras Dam operations are the single most important factor affecting the species in the watershed and "planning cannot be forestalled until the development of the HCP." The comment further states that the proposed HCP is speculative and cannot be relied upon for recovery of steelhead in the watershed.

The Draft EIR project includes flow release schedules that were developed to provide suitable habitat conditions for future steelhead and other native fishes and aquatic resources (see Vol. 1, Chapter 3, page 3-69). Vol. 2, Chapter 6, pages 6-23 – 6-32 and Vol. 3, Appendix J, analyze the potential effects of these flows on steelhead. Please refer to Chapter 9 of this Comments and Responses document, and specifically to Section 9.2.2, regarding the updated and revised instream flow schedules that are included in the CDRP Variant. Also see Section 9.5.2, for information regarding potential effects on steelhead. The SFPUC is currently undergoing an FESA Section 7 consultation for CDRP with NMFS, with the USACE serving as the federal action agency. The purpose of the Section 7 consultation with NMFS is to obtain FESA coverage for steelhead for the construction and operation of the proposed CDRP. As a result, the proposed construction and operation of the CDRP does not rely on the implementation of the HCP.

As discussed in Vol. 2, Chapter 6, pages 6-23 – 6-32, the SFPUC anticipates that the Alameda Watershed HCP will serve as the long-term management tool for recovery of a steelhead population in areas of the watershed affected by operations and maintenance of SFPUC facilities. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding issues related to project effects on steelhead, monitoring and adaptive management, and the Alameda Watershed HCP.

O-ACA&CBD1-67 The comment requests that "[a]chieve maximum consistency with on-going efforts to restore steelhead in the Alameda Creek watershed" be added as a primary project objective. For reasons stated in the master response presented in Section 10.4, Fisheries, Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals, no changes to project objectives are proposed.

O-ACA&CBD1-68 The commenter states that the unscreened diversion at the ACDD must be screened according to the Fish and Game Code.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, under "Compliance with the Fish and Game Code" for response to comments on this topic. Note that the CDRP Variant, includes installation of a fish screen at the Alameda Creek Diversion Tunnel. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-ACA&CBD1-69 The commenter references EIR text on page 1-17 (Vol. 1, Chapter 1, Section 1.4.2) that cites the 1997 MOU "without reference to its provisions or implementation status" and requests that the relevance of the 1997 MOU to the proposed project be explained.

The comment refers to the discussion in the Executive Summary, and the commenter is referred to Vol. 1, Chapter 3, pages 3-66 – 3-69, for a discussion of how the Draft EIR project proposes to release and/or bypass flows consistent with the 1997 MOU. Appendix H of the EIR includes a copy of the signed 1997 MOU in its entirety. In addition, further description is provided in the master response presented in Section 10.4, Fisheries, and specifically in Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant.

Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-ACA&CBD1-70 The comment states that the environmental baseline should include operating requirements set forth in the 1997 MOU (decreases in diversions from the ACDD and increases in releases from Calaveras Reservoir).

As discussed in Section 10.2, Baselines Used in the Environmental Analysis, the EIR setting (baseline) reflects existing conditions with respect to diversions at the ACDD and flow releases from Calaveras Reservoir. Refer to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) Between the San Francisco Public Utilities Commission (SFPUC) and California Department of Fish and Game (CDFG), and Unimpaired Flows, for further response. The 1997 MOU flows are part of the Draft EIR project described in the EIR. They are replaced by the proposed instream flow schedule in the CDRP Variant. See Chapter 9 of this Response to Comments document for more information.

O-ACA&CBD1-71 The comment references discussion in the Draft EIR regarding the reasons why the 1997 MOU flows have not been implemented. The commenter states that the Draft EIR misrepresents the limitation of the DSOD restrictions and requests that the text be changed. The comment also asserts that the SFPUC's yield from Calaveras Reservoir has not been proportionally affected by the DSOD operating restriction.

The comment refers to the discussion in the Executive Summary, and the commenter is referred to Chapter 3 of the EIR for a more detailed description of the DSOD requirements (Vol.1, Chapter 3, Section 3.2, page 3-5) and of the existing operations of the reservoir without the MOU flows (Section 3.3.4, pages 3-17 – 3-20).

With regard to the assertion that the DSOD restriction has not affected the SFPUC's available water supply, this comment is incorrect. Since implementation of the DSOD restriction on Calaveras Reservoir, the SFPUC has been operating with a reduced margin of delivery reliability that would only become evident during a prolonged drought. For periods with normal and above normal rainfall, such as 2004 and 2005 as cited by the commenter, the delivery reliability for that specific year is not at risk, but the SFPUC operates its regional water system to plan for droughts, earthquakes, and other emergency scenarios. With full implementation of the WSIP, including the CDRP, the SFPUC would be able to achieve the water supply and delivery reliability goals and levels of service objectives as described on EIR page 2-6 (Vol.1, Chapter 2, Section 2.2).

O-ACA&CBD1-72 The comment references discussion in the Draft EIR regarding proposed flow release schedules. The commenter states that the use of the term "high" to describe winter flow under the 1997 MOU is inappropriate.

The comment refers to the discussion in the Executive Summary, and the commenter is referred to Chapter 3 of the EIR for a more detailed description of the 1997 MOU flows (Section 3.6.5, pages 3-66 – 3-69). The use of the term "high" is relative to the "low" flow periods in the MOU flow schedule and represents a fourfold increase (see Figure 3.16, page 3-68).

O-ACA&CBD1-73 The commenter states that the flow schedules are characterized as coinciding with the seasonal habitat requirements for steelhead trout when there is no provision for adequate steelhead migration flows or channel shaping flows, both of which must be considered in seasonal habitat requirements for steelhead.

The EIR provides detailed analysis of the flow schedules in relation to steelhead beginning on page 6-23 (Vol. 2, Chapter 6, Section 6.2.3.3) and in Appendix J (Vol. 3). Also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras

Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding the effects of flows on steelhead migration, channel shaping flows, and the SFPUC's proposed monitoring and adaptive management strategy.

Note that the CDRP Variant includes revised flow schedules, a fish ladder at the ACDD, and installation of a fish screen at the upstream end of the diversion tunnel at the ACDD, which would reduce the maximum flow diversion capacity at that location from approximately 650 cfs to 370 cfs. Refer to Chapter 9 for more information.

O-ACA&CBD1-74 The comment references the proposed flow schedules for steelhead, which would be implemented when steelhead have regained access to the upper watershed. The commenter states that a program is in place to move in-migrant steelhead upstream from the BART weir and flows to support the anadromous form of the species should not be deferred.

The EIR (Vol. 1, Chapter 4, Section 4.5.1.2, pages. 4.5-43 – 4.5-44) describes occurrences of steelhead in the watershed, including individual fish that have been periodically moved upstream from BART weir. As described, on pages 4.5-52 – 4.5-54, because steelhead access does not currently exist and there is no current steelhead migration upstream of BART weir, the Draft EIR project's proposed flows schedule for steelhead would not be implemented until access is regained. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant regarding the timing of implementation of the proposed flow schedules for steelhead.

Please refer to Chapter 9 of this Comments and Responses document for a description of the proposed flow schedules for the CDRP Variant and impacts on steelhead.

O-ACA&CBD1-75 The commenter states that flows associated with the 1997 MOU cannot reasonably be evaluated as part of this project, nor can the impact analysis claim beneficial effects of the CDRP merely because the SFPUC has not yet implemented the flows agreement and claims it will implement it in the future.

Please refer to the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, and specifically to Section 10.2.3, Baseline Considerations Regarding DSOD Restrictions, the 1997 Memorandum of Understanding (MOU) Between the San Francisco Public Utilities Commission (SFPUC) and California Department of Fish and Game (CDFG), and Unimpaired Flows. Please also refer to Section 10.4.2, Flows as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, regarding inclusion of 1997 MOU flows are part of the CDRP, and effects of operations on fish and aquatic habitat.

Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the proposed flows schedule for CDRP Variant.

O-ACA&CBD1-76 The commenter states that throughout the Draft EIR, the use of the terms "stable" and "reliable" regarding flows should not be incorporated as criteria to measure suitability for fish because a flow may be both stable and reliable and be entirely inappropriate for fish habitat purposes.

The terms "stable" and "reliable" are used in the context of the project providing minimum flow releases and/or bypasses at all times compared to existing conditions where there are no minimum flows schedules as part of current operations. For example, analysis of Draft EIR project-related effects associated with proposed operation of the ACDD provided in Vol. 1, Chapter 4, Section 4.5.2.3, page 4.5-60 describes that the proposed operation would result in more regular diversions at the ACDD when compared to the baseline condition; however, the proposed operations would also include operational criteria and ensure minimum instream flows (consistent with the 1997 MOU) that would provide flows at all times when those flows are naturally present. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for additional information on this topic.

O-ACA&CBD1-77 The comment makes two points: that the baseline for the geomorphology analysis is applied inconsistently, and that the Draft EIR inaccurately states that high magnitude channel maintenance flows would continue after implementation of the CDRP.

Please see the master response presented in Section 10.3, Hydrology, and specifically Section 10.3.4, Geomorphology, Sediment Transport, and

Channel Formation, under the subsection entitled "Baseline for Geomorphology Analysis" with respect to the first point, and the subsection entitled "Effects of Peak Flows on Channel Formation" for a response to the second point. Also refer to Section 10.3.3, Diversions and Streamflow, under the subsection entitled "flows Downstream of the ACDD" for additional response to the second point. In addition, please see Chapter 9, Sections 9.2 and 9.3, for a description and analysis of the proposed instream flow schedule proposed as part of the CDRP Variant, which would replace the 1997 MOU flows that are part of the Draft EIR project.

O-ACA&CBD1-78 The commenter states that a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. The commenter also states that SFPUC water supply operations cause significant steelhead habitat impacts, and that these are cumulative impacts of the CDRP (regardless of baseline) requiring mitigation.

The EIR (Vol. 2, Chapter 6, Section 6.2.3.3, pages 6-23 – 6-32 and Vol. 3, Appendix J) analyzes potential project effects on steelhead under a future cumulative scenario in which it assumes that, although not currently present in upper Alameda Creek, steelhead access to the watershed could be restored prior to completion of the CDRP. The analysis (page 6-25) acknowledges that the combined effects of past and present projects (including SFPUC projects) have resulted in a significant adverse cumulative impact on steelhead in the Alameda Creek watershed.

Further, the EIR (Vol. 2, Chapter 6, Section 6.2.3.3, pages 6-26 – 6-32) concludes that the Draft EIR project would result in a beneficial effect compared to existing conditions, and that the project would therefore not make a considerable contribution to the significant cumulative impact on steelhead in the Alameda Creek watershed. Please also refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding potential project effects on steelhead and the SFPUC's proposed monitoring and adaptive management strategy.

Regarding cumulative impacts associated with implementation of the CDRP Variant, refer to Section 9.5.2 in Chapter 9 of this comments and responses document.

O-ACA&CBD1-79 The commenter states that the Draft EIR notes that the project could have a significant impact on fish in Alameda Creek downstream from the ACDD, but that the significance level is reduced by monitoring and adaptive management. The commenter further states that to maintain logical consistency, the impact needs to be identified as less than significant (and stay less than significant with implementation of monitoring and adaptive management), or it needs to be identified as significant and be mitigated by flow releases.

As stated in the EIR, although the bypass flows associated with the Draft EIR project are expected to be adequate to sustain habitat conditions and the resident fish community downstream of the ACDD, monitoring and adaptive management required under EIR Mitigation Measures 5.5.5a and 5.5.5b would further ensure that future operations of the ACDD do not have a significant impact on the resident trout population in Alameda Creek. The significance level of the impact being referenced by the commenter (Impact 4.5-5) was therefore found to be less than significant with implementation of Mitigation Measures 5.5.5a and 5.5.5b (see Vol. 1, Chapter 4, Section 4.5, page 4.5-70, and Vol. 2, Chapter 5, pages 5-16 and 5-17). Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for further discussion of this impact and mitigation measure.

Regarding the CDRP Variant, because of the beneficial effects associated with the fish screen at the diversion tunnel, the reduced diversion capacity, and AMIP, Mitigation Measure 5.5.5a (requiring the SFPUC to develop and implement a monitoring program to ensure that the proposed flow releases are sufficient to sustain the resident trout population in Alameda Creek downstream of the ACDD) and Mitigation Measure 5.5.5b (requiring the SFPUC to implement adaptive management measures including additional flow releases, seasonal restrictions on operation of the ACDD, or installation of a fish screen at the diversion tunnel) would not be needed. Consequently, these mitigation measures would not apply to the CDRP Variant. Refer to Chapter 9 for a description of the Variant and analysis of its environmental impacts.

O-ACA&CBD1-80 The comment states that the use of the term “fish passage barrier” is inappropriate in this context and that the text should say “fish screen” or use the generic term "entrainment prevention method." [The text is part of Measure 5.5.5b, which would mitigate impacts on native fish in Alameda Creek downstream of the ACDD.]

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for discussion of this topic. Regarding the CDRP Variant, refer to Response O-ACA&CBD1-79.

O-ACA&CBD1-81 The commenter states that the conclusion for Impact 4.5.6 implies that re-operating diversions at the ACDD and Calaveras Reservoir will not restrict the range of steelhead. The commenter states that they strongly disagree because steelhead migration flows are not proposed as part of the project and the impact involves a mandatory finding of significance.

Impact 4.5.6 (Vol. 1, Chapter 4, Section 4.5.2.3, beginning on page 4.5-70) addresses effects of project facilities on fish and aquatic habitat in the primary study area. The impact discussion does not address steelhead migration because there is not currently steelhead migration access upstream of BART weir into the primary study area. Instead, impacts on steelhead, including migration conditions, are addressed in the Draft EIR under cumulative impacts (Vol. 2, Chapter 6, Section 6.2.3.3, beginning on page 6-23). As identified in the cumulative analysis, rather than restricting the range of steelhead, the CDRP would improve steelhead habitat by providing suitable hydrologic and temperature conditions (as would the CDRP Variant – refer to Section 9.5.2 of this comments and responses document). With regard to a mandatory finding of significance for impacts to steelhead, please refer to Response O-ACA&CBD1-10. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding potential project effects on steelhead. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the proposed flows schedule for the CDRP Variant.

O-ACA&CBD1-82 The commenter requests that "consistency with steelhead restoration" be added as a primary project objective. See the master response presented in Section 10.4, Fisheries, and specifically Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals.

O-ACA&CBD1-83 The comment states that Section 3.5.6, Operation of the Reservoir During Construction, should state that the surface elevation of the reservoir would not be lowered to less than 690 feet.

The first sentence in EIR Vol. 1, Chapter 3, Section 3.5.6, on page 3-62 states "…the reservoir would continue to operate in a manner similar to the current restricted operations, with the water level maintained between Elevation 690 and 705 feet." The EIR on page 3-16 explains that, pursuant to the 1991 MOU with the CDFG, a minimum water elevation of 690 feet is maintained to prevent entrainment of juvenile fish into the intake of the outlet works. Please note that under the CDRP Variant, fish screens would be installed on Adits #1 and #2 to prevent entrainment of fish into the intake structure.

O-ACA&CBD1-84 The comment questions text in the EIR (Vol. 1, Chapter 3, Section 3.6, page 3-64) indicating that there will be a decrease in average annual diversions at the ACDD as a result of the Draft EIR project.

The text is correct. Please see Section 10.3.3, Diversions and Streamflow, and the subsection entitled "SFPUC's Total Annual Diversions from the Alameda Creek Watershed."

O-ACA&CBD1-85 The comment references the ongoing work being conducted by the Alameda Creek Fisheries Restoration Workgroup and the commenter states that the project should commit to supplying in-stream flows as dictated by the needs of steelhead trout as expressed through the stakeholder process. The commenter further states that the EIR "must incorporate mitigation (including appropriate flows) for the reasonably expected impacts of CDRP implementation on steelhead habitat."

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding flow studies and release schedules and the SFPUC's active involvement in the Alameda Creek Fisheries Restoration Workgroup and proposed monitoring and adaptive management strategy. Consistent with CEQA, the EIR identifies mitigation measures for identified significant or potentially significant impacts (either direct or cumulative) of the project, and the EIR (page 6-31) determined that although the Alameda Creek conditions would remain limited under the future scenario, the CDRP's *contribution* to the significant cumulative impact on steelhead in Alameda Creek would be beneficial, and thus, less than significant. No mitigation is warranted.

O-ACA&CBD1-86 The comment references the EIR and states that the SFPUC will develop an HCP, which would serve to potentially modify the proposed flow schedules. The commenter further states that the proposed HCP process is speculative and cannot be relied upon for mitigation or recovery of steelhead in the watershed.

This comment reiterates concerns raised in Comment O-ACA&CBD1-66; refer to Response O-ACA&CBD1-66.

O-ACA&CBD1-87 The comment states that the flow releases associated with the project should address the full range of steelhead habitat requirements, including migration and channel shaping and flushing flows essential to accommodate the needs of steelhead and that flow regimes should be structured to mimic storm hydrographs as much as possible.

Vol. 2, Chapter 6, Section 6.2.3.3, beginning on page 6-23 and Vol. 3, Appendix J provide detailed analysis of the Draft EIR project flow schedules in relation to steelhead. Specifically, approach to the analysis of the flow schedules relies on the PCE framework and provides separate discussions for migration, spawning and egg incubation, and rearing. Vol. 1, Sections 4.5 and 4.6 provide a detailed analysis of flows in relation to periodic channel forming flows. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments on these topics.

In regards to the comment on the need to mimic the natural hydrograph, Vol. 1, Chapter 3, Section 3.6.6, pages 3-69 and 3-70 and Vol. 3, Appendix J provide a discussion on the Draft EIR project flow schedules for steelhead, which provide varying minimum flows by season and water-year type (e.g., wet, normal, and dry). This approach of providing varying minimum flows by water-year type considered the natural variability of unimpaired flows in the watershed.

Proposed operation of the ACDD under the CDRP Variant would better mimic the natural hydrograph relative to either the existing condition or the Draft EIR project because of increased bypass flows and decreased maximum diversion. Also see Response O-Acterra et al.-16.

O-ACA&CBD1-88 The comment references the EIR stating that flows may be modified through the federal permitting process and the commenter raises concerns regarding deferring mitigation.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the issue that flows may be modified through the federal permitting process and the assertion that the timing for adaptive management is too long for meaningful response.

The proposed flows schedule associated with the CDRP Variant reflects exactly that: modification in response to consultation with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant, including the proposed AMIP.

Under both the Draft EIR project and the CDRP Variant, mitigation measures for impacts on biological resources are clearly identified and mitigation is not being deferred. If the SFPUC adopts the proposed project and associated CEQA Findings, it would also include adoption of the mitigation measures as part of the Mitigation Monitoring and Reporting Program.

O-ACA&CBD1-89 The commenter states that the Draft EIR does not include sufficient evidence to conclude that flow releases schedules specified in the MOU would also support California red-legged frog.

Under CEQA, impact conclusions are determined based on the change that would occur with the project compared to baseline conditions. As stated on page 4.4-89 (EIR Vol. 1, Chapter 4, Section 4.4.2.3), compared to the baseline, minimum flows would consistently provide water during the California red-legged for breeding and rearing season. Under baseline conditions, breeding and rearing conditions may be impaired by diversion of all flows under 650 cfs. It is reasonable to conclude that by improving the reliability of suitable breeding and rearing habitat through a more consistent presence of water, there would be a net improvement in overall California red-legged frog habitat quality under the Draft EIR project. Nonetheless, because the anticipated results are difficult to prove or otherwise measure at this time, the EIR has been revised to indicate less certainty, stating that the releases *could* benefit the California red-legged frog when compared to baseline conditions. See Response A-CDFG-26 for text changes relating to this comment. Under the CDRP Variant, as described in Chapter 9 of this Comments and Responses document, the inclusion of a fish screen at the ACDD would reduce the maximum flow diversions from approximately 650 cfs to 370 cfs, which would also result in an improvement in California red-legged frog habitat quality.

O-ACA&CBD1-90 The comment addresses text in a table summarizing impacts and mitigation measures identified in the WSIP PEIR for projects within the Alameda Creek watershed (see CDRP EIR, Vol. 1, Chapter 4, Table 4.1.2, page 4-16). That impact (Impact 5.4.1-2 in the WSIP PEIR) addresses effects on flows along Alameda Creek below the ACDD and identifies the impact as significant and unavoidable. This comment questions why the corresponding impact in the CDRP EIR, Impact 4.6.5 (see CDRP EIR, Vol. 1, Chapter 4, pages 4-16), is identified as less-than-significant, and asserts that project specific analysis was not conducted.

The reason for the change in significance determination from the WSIP PEIR to the CDRP EIR was the addition of certain new features to the CDRP and completion of a more detailed examination of the effects of the Draft EIR project on flows below the ACDD. For more information, please see Section 10.3.3, Diversions and Streamflow, and the subsection entitled “Flows Downstream of the ACDD.” An analogous analysis of impacts on flow under the CDRP Variant is included in Section 9.3.6 of this Comments and Responses document.

O-ACA&CBD1-91 The comment suggests that compliance with the 1997 MOU is unrelated to the project and should not be regarded as mitigation or as compliance with the Environmental Stewardship Policy. The comment further states that because the project fails to release water consistent with the needs of steelhead, the project would conflict with the Environmental Stewardship Policy.

As stated in the EIR (Vol. 1, Chapter 3, Section 3.6, EIR page 3-63), the Draft EIR project included a flow release schedule that was consistent with the 1997 MOU. This flow schedule was not meant to serve as mitigation for fishery and hydrology impacts but rather was part of the Draft EIR project, and the impacts of the proposed flow schedule were evaluated in the analyses for fisheries and hydrology presented in EIR Chapter 4, Sections 4.5 and 4.6 (Vol. 1). The master response presented in Section 10.4, Fisheries, and specifically Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, which address water releases. Response A-CDFG-10 addresses project compliance with the Environmental Stewardship Policy with respect to diversions and releases from SFPUC reservoirs.

As noted above, under the CDRP Variant, the steelhead flows described in Chapter 3 are replaced by the proposed instream flow schedule described in Chapter 9.

O-ACA&CBD1-92 The comment addresses the effects of the Draft EIR project on flow in Alameda Creek downstream of its confluence with Arroyo de la Laguna and requests that the following statement be removed from the CDRP EIR, "While the operation of Calaveras Reservoir and the ACDD influences flow conditions in the extended study area, it is difficult to distinguish this influence from the effect of these other water projects" (CDRP EIR, Vol. 1, Chapter 4, page 4.5-2).

The statement is accurate. It is difficult to estimate the effect of the Draft EIR project on flows in Alameda Creek below the Arroyo de la Laguna for several reasons. Knowledge of the effects of the gravel mining operations on flow in Alameda Creek in the Sunol Valley is incomplete, making it difficult to estimate how much water reaches the Alameda Creek/Arroyo de la Laguna confluence. Downstream of Niles Canyon, the Alameda County Water District operates a number of percolation ponds. Information on the amount of water that continues down Alameda Creek beyond the ponds is incomplete. Despite the difficulty, a model was developed and used to estimate flow in Alameda Creek below the Arroyo de la Laguna confluence with the Draft EIR project. The results are included in the CDRP EIR (Chapter 4, pages 4.6-94 – 4.6-98). Please see Section 10.3.3, Diversions and Streamflow, and specifically the subsection entitled "Flow in Alameda Creek Downstream of Arroyo de la Laguna," for more information. Similar information is provided for the CDRP Variant in Section 9.3.6.

O-ACA&CBD1-93 The comment states that the Alameda Creek watershed historically supported coho and Chinook salmon.

The comment is noted. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for a discussion on coho and Chinook salmon.

O-ACA&CBD1-94 The comment states that the EIR should discuss the context of extensive fish passage projects being pursued by the Alameda Creek Fisheries Restoration Workgroup downstream of the SFPUC facilities and their schedule for completion.

Vol. 2, Chapter 6, Section 6.2.3.3, pages 6-23 – 6-32 and Vol. 3, Appendix J, provide a description of fish passage projects being pursued downstream of the SFPUC facilities and their schedule for completion. Please also see Response A-ACWD-04 (Section 11.1.8), where related information is presented.

O-ACA&CBD1-95 The comment asserts that the Environmental Stewardship Policy obligates the SFPUC to release flows in a manner that mimics the variation of the seasonal hydrology, and that the proposed flow schedules are inconsistent with this policy.

This comment is responded to under Response A-CDFG-10. For a discussion of flow schedules for year types, refer to the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.3, Diversions and Streamflow. See also Response O-Acterra et al.-16 regarding flow releases relative to the natural, seasonal hydrology.

As noted previously, refer to Chapter 9, Section 9.2, for a description of the proposed instream flow schedule for the CDRP Variant.

O-ACA&CBD1-96 The comment refers to Table 4.5.1 in the EIR, which shows the dates that the gates on the diversion tunnel at the ACDD were opened and closed during the DSOD-restricted period, and states that it would be appropriate if the narrative associated with the table quantified baseline flows.

For background information, please see the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, and specifically to Section 10.2.2, Use of Appropriate Baselines, for a description of considerations for the baseline used to evaluate impacts associated with hydrology. The baselines used in the hydrology reflect the long-term processes of streamflow and related hydrogeologic and geomorphic forces that are the predominant factors affecting the existing conditions. Flow in a stream at a single point in time tells very little about its overall hydrology. Similarly, the fish present in the stream on a particular day provide only a limited characterization of fish populations that might use the stream at other times.

Because of the foregoing, the hydrologic analysis did not attempt to compare measured flows in Calaveras Creek and Alameda Creek in the years between 2001 and the present with modeled flows in the streams with the project in place. Instead, the analysis compared modeled flows in the streams with and without the project. Both the with-project and without-project conditions employed 82 years of historical hydrologic data that represents a long-term range of wet, above normal, normal, below normal, and dry conditions. Note also that the 1997 MOU flows included as part of the Draft EIR project are replaced by the proposed instream flow schedule in the CDRP Variant. Analogous to the approach taken for the Draft EIR project, the evaluation of the hydrologic impacts of the CDRP Variant presented in Chapter 9, Section 9.3, of this Comments and Responses document compares modeled flows in the streams with and without the Variant.

O-ACA&CBD1-97 The comment correctly quotes EIR text stating that "the resident rainbow trout that occur in the watershed upstream of the BART weir are not designated as a listed species nor proposed for listing," and makes two points: that NMFS has proposed listing these fish as part of the CCC steelhead population once adult steelhead have access to Alameda Creek above the BART weir, under the similarity of appearance provision (citing the Federal Register publication on the NMFS final rule that was cited in the EIR [71 FR 834; January 5, 2006]); and that adult steelhead that are moved annually upstream of the BART weir under a relocation and monitoring program permitted by NMFS and CDFG are listed as CCC steelhead trout.

The Draft EIR (Vol. 1, Chapter 4, Section 4.5, pages 4.5-39 – 4.5-45) discusses the regulatory status and documented occurrences of steelhead trout in the watershed. The first point made in this comment does not conflict with this discussion. The second point is inconsistent both with the language of NMFS's final rule (71 *FR* 834; January 5, 2006) which states that the listed Central California Coast Steelhead DPS consists of "all naturally spawned anadromous steelhead populations below natural and man-made impassable barriers" (71 *FR* 834; January 5, 2006; upheld by the United States Court of Appeals for the Ninth Circuit August 20, 2010 [Modesto Irrigation District v. Gutierrez, 2010]) and with NMFS and Alameda Creek Alliance public statements made during the process in which Alameda Creek Alliance was seeking permission from NMFS to relocate listed fish. Refer to Response ACA&CBD1-74 above for additional discussion on the latter point.

O-ACA&CBD1-98 The comment states that steelhead restoration in the Alameda Creek watershed occurs primarily through the auspices of the Alameda Creek Fisheries Restoration Workgroup and the commenter requests that the significance criteria be revised to reflect consistency with the efforts and plans of this group.

The significance criteria used in the EIR to evaluate impacts of the CDRP on fisheries and aquatic habitat are based on the San Francisco Planning Department's standard CEQA initial study checklist and the CEQA Guidelines, Appendix G and address potential changes in the physical environment applicable to a wide range of projects, rather than consistency with the efforts of any particular organization or forum (e.g., Workgroup) for a specific project. However, as described in Section 4.5.2, the presence, distribution, and abundance of fish species in areas potentially affected by the CDRP; aquatic habitat conditions and habitat suitability; relationship between streamflow and relevant life stage habitat suitability; and factors that presently limit fish populations are considered in the analysis of impacts on fishery resources and the resulting significance determination. The impacts of the Draft EIR project on steelhead are described in EIR Section 6.2.3.3, EIR pages 6-23 – 6-32 (Vol. 2, Chapter 6). Also see the master response presented in Section 10.4, Fisheries, specifically Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead. Refer to Chapter 9, Section 9.3.5 for the analysis of impacts of the CDRP Variant on fisheries.

O-ACA&CBD1-99 The comment states that the impact of destroying 945 lineal feet of stream may (or may not) be less than significant, but it nevertheless should be mitigated, and restoring the portion of Arroyo Hondo affected by recent landslide activity would be appropriate mitigation.

Please refer to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for discussion regarding construction-related effects to habitat in Calaveras Creek. The analysis concluded that the permanent loss of marginal-quality aquatic habitat in a relatively small section of Calaveras Creek would not result in a substantial reduction in habitat in the watershed, an adverse effect on special-status fish species, or a substantial change in the fish community of the watershed; therefore, based on CEQA significance criteria, the impact would not be considered significant, and no mitigation is warranted.

EIR Section 4.5.1 (page 4.5-21) describes existing conditions in Arroyo Hondo upstream of Calaveras Reservoir (Reach AH-1 and AH-2) including the massive landslide at the upstream end of reach AH-1 where the landslide has deposited large boulders in the creek, forming a series of falls that are a barrier to upstream fish migration. Analysis of the effects of the project on this reach of Arroyo Hondo is presented in Impact 4.5-7 (pages 4.5-76 – 4.5-77) and, as the analysis indicates, the increase in reservoir elevation under the proposed project would provide improved hydrologic connectivity between the reservoir and Arroyo Hondo, and the impact would be less than significant. CEQA does not require mitigation for impacts that are determined to be less than significant (CEQA Guidelines Section 15126.4(a)(3)). The suggestion regarding improving access to stream habitat in the portion of Arroyo Hondo above the landslide is noted.

O-ACA&CBD1-100 The comment references the EIR as stating that "No facilities or provisions for fish passage are proposed; therefore, the proposed replacement dam would not change the extent to which fish passage or migration is impeded by the existing dam," claiming that there is no effect because this is the existing condition.

The commenter correctly summarizes the analysis of barriers to fish movement caused by the project. Vol. 1, Chapter 4, Section 4.5, pages 4.5-56 – 4.5-57 (Impact 4.5.3) provide an analysis of potential effects of the project on creating barriers to fish movement. The analysis appropriately concludes that the proposed Calaveras Dam replacement and the proposed modifications to the ACDD would have no effect on fish passage at either of these existing passage barriers. However, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant which includes a fish ladder around the ACDD; refer to Chapter 9 for more information on the Variant. Also see the master response provided in Section 10.4, Fisheries, specifically Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and the subsection entitled "Fish Passage at the ACDD and Calaveras Dam" for further discussion.

O-ACA&CBD1-101 The comment states that the project would involve re-operation of ACDD at full capacity, which has the potential to affect the movement of sensitive species (i.e., upper Alameda Creek rainbow trout). The commenter states that this effect has a mandatory finding of significance that may be mitigated only through installation of a fish screen at ACDD.

As a point of clarification, the ACDD currently operates at full capacity; the operation of the Alameda Creek diversion tunnel is modified in response to the DSOD restrictions on storage levels in Calaveras Reservoir. With regard to the need to make a mandatory finding of significance on impacts to rainbow trout, Voi. 1, Chapter 4, Section 4.5, pages 4.5-60 – 4.5-70 (Impacts 4.5.5) provides an analysis of effects of entrainment in the ACDD diversion tunnel on rainbow trout. As noted in the EIR analysis, due to the general behavior characteristics of rainbow trout, the fact that they have sustained a population above ACDD over the past 70 years of diversion tunnel operation, the operation of the ACDD is expected to result in a less than significant impact on rainbow trout. Please also refer to Response O-ACA&CBD1-10 for additional discussion on the need to make mandatory findings of significance.

While the EIR concludes that impacts of the Draft EIR project on rainbow trout would be less than significant, the CDRP Variant includes installation of a fish screen at the upstream end of the diversion tunnel at the ACDD and a fish ladder around the ACDD. Refer to Chapter 9 for more information.

O-ACA&CBD1-102 The comment states that the EIR must examine the effects of the ACDD and Calaveras Dam re-operation on movement and migration opportunities downstream of these facilities (including in the extended study area). The proposed diversion rate of approximately 86 percent of unimpaired flow has the potential to create an impact with a mandatory finding of significance. The Draft EIR does not address the effect of diversions on downstream passage conditions; the "no impact" designation therefore is inadequate, as is the lack of mitigation for this significant unavoidable impact.

The EIR in Vol. 1, Chapter 4, Section 4.5, pages 4.5-60 – 4.5-76 (Impacts 4.5.5 and 4.5.6) and pages 4.5-78 – 4.5-80 (Impact 4.5.8) provides detailed analysis of potential effects of the ACDD and Calaveras Dam operations under the Draft EIR project on downstream habitat in the primary and extended study areas, respectively. Vol. 2, Chapter 6, Section 6.2.3.3, pages 6-23 and Vol. 3, Appendix J provide detailed analysis of the potential operational effects in relation to steelhead movement and migration. With regard to the need to make mandatory findings of significance, CCSF is required to make findings for all significant impacts identified in the EIR prior to project approval (CEQA Guidelines Section 15091). This includes potentially significant impacts that would be reduced to a less-than-significant level with implementation of identified mitigation measures. This would apply to fisheries resources impacts that would be less-than-significant with mitigation (Impacts 4.5.1, 4.5.4, 4.5.5, and 4.5.9). As indicated in the analysis of effects on fisheries and aquatic resources, and hydrology (Vol. 1, Sections 4.4, 4.5, and 4.6) the CDRP would have no significant unavoidable impacts on fisheries or hydrology. Please also refer to Response O-ACA&CBD1-10 for additional discussion on the need to make mandatory findings of significance. Please refer to the master response in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam and Calaveras Dam, for responses to comments on potential effects associated with the proposed operation of the ACDD and Calaveras Dam. Also see the master response presented in Section 10.3, Hydrology, specifically Section 10.3.3, Diversions and Streamflow, for clarification of proposed diversion rates.

O-ACA&CBD1-103 The comment states that an adequate evaluation of the impacts of the CDRP on downstream movement and migration of steelhead must also consider the effects of proposed new diversion points in the Sunol Valley, such as is proposed by the SFPUC under the related Upper

Alameda Creek Filter Gallery Project, which is proposed as part of implementing the 1997 MOU and must be included in the context of the current environmental review. The comment also states that new facilities to "recapture" in-stream flow releases will adversely impact passage conditions downstream and will be subject to a mandatory finding of significance and will conflict with the stewardship policy.

The Upper Alameda Creek Filter Gallery Project is not a part of the CDRP, but as another facility improvement project under the WSIP, it is considered in the cumulative impact analysis. Please refer to the Section 10.3.6, Cumulative Impacts, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments on the Upper Alameda Creek Filter Gallery Project.

O-ACA&CBD1-104 The comment states that Impact 4.5.4 vastly underestimates the potential impacts of Haul Route Option 2, which involves using barges to cross the reservoir.

The commenter has expressed opinion regarding Impact 4.5.4, but has presented no evidence or analysis to refute the substantial evidence presented and relied upon in the EIR. The EIR addresses the potential impacts of Haul Route Option 2 in the following sections of Chapter 4: Impact 4.5.4: Temporary effects on fisheries resources related to increases in sediments and turbidity and to release of and exposure to contaminants (Vol. 1, Section 4.5, pages 4.5-57 – 4.5-60); Impact 4.7.1: Impact on water bodies as a result of soil erosion and sediment discharge during construction (Vol. 2, Section 4.7, pages 4.7-25 – 4.7-44); Impact 4.7.3: Impact on water bodies as a result of erosion and sediment discharge or a hazardous materials release associated with construction of barge docking facilities and during barging operation (Vol. 2, Section 4.7, pages 4.7-55 – 4.7-57); Impact 4.12.1: Traffic delays due to temporary lane and road closures during construction (Vol. 2, Section 4.12, pages 4.12-7 – 4.12-9); and Impact 4.13.1: Impact of short-term increases in emissions of criteria air pollutants and precursors (Vol. 2, Section 4.13, pages 4.13-33 – 4.13-37). As discussed in these analyses (with the exception of short term air quality impacts), the CDRP's significant impacts related to Haul Route Option 2 (and related construction activities) would be reduced to less-than-significant levels with implementation of the identified mitigation measures. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for responses to comments regarding construction-related effects to fishery resources in Calaveras Reservoir, including effects associated with implementation of Haul Route Option 2.

O-ACA&CBD1-105 The comment states that the reservoir trout population is of unique importance to restoring steelhead to the Alameda Creek watershed, due to its genetic legacy as descended from the original steelhead trout run in the watershed and that potential harm to a population already stressed by reduced reservoir volume must be reduced through more elaborate mitigation than reliance on standard construction BMPs. The commenter suggests that a plan be developed in consultation with CDFG to protect the trout population of the reservoir during construction and that appropriate further mitigation could include improving access to suitable stream habitat for this trout population in the portion of Arroyo Hondo affected by recent landslide activity.

Please see Responses O-ACA&CBD1-54, O-ACA&CBD1-99, and O-ACA&CBD1-104. Also see the master response presented in Section 10.4, Fisheries, and specifically Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, regarding construction impacts on fisheries in Calaveras Reservoir. As noted, the EIR provides a thorough analysis of construction impacts, and mitigation measures in the EIR would reduce the project's significant impacts on fisheries and aquatic habitat and water quality to less-than-significant levels. Therefore, no additional mitigation is required.

Regarding the suggestion that the SFPUC consult with CDFG about a plan to protect the reservoir trout population during construction, please note that the SFPUC is currently consulting with CDFG in accordance with that agency's authority under the Fish and Game Code, specifically Section 1602, regarding Lake and Streambed Alteration Agreement. Refer to EIR Vol. 1, Chapter 3, Section 3.7, page 3-72, for a description of this discretionary approval.

The suggestion regarding improving access to suitable stream habitat in the portion of Arroyo Hondo affected by landslide activity as mitigation is noted. Mitigation sites identified to date by the SFPUC are listed in Table 5.1 (EIR page 5-15).

Note also that the CDRP Variant was developed in close coordination with NMFS and CDFG and includes various fishery enhancements as a result of regulatory permitting coordination with these agencies. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-ACA&CBD1-106 The comment makes three points: that the flows called for in the 1997 MOU should be a part of the baseline or existing condition; that the diversion tunnel at the ACDD should be equipped with a fish screen and the ACDD with a fish ladder; and that the flow at the diversion should be monitored.

With respect to the first point, please see Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and the California Department of Fish and Game (CDFG), and Unimpaired Flows.

With respect to the second point, under the Draft EIR project, analysis of operational impacts on fisheries in Alameda Creek (Impact 4.5.5, pages 4.5-60 – 4.5-70) indicates that neither a fish screen nor fish ladder is warranted as mitigation for project impacts on fisheries, and implementation of Mitigation Measures 5.5.5a (Resident Rainbow Trout Monitoring) and 5.5.5b (Resident Rainbow Trout Adaptive Management) would reduce impacts to a less than significant level. Under the CDRP Variant, the project includes installation of a fish screen at the upstream end of the diversion tunnel at the ACDD and construction of a fish ladder which would provide passage for fish at the ACDD. Please see Chapter 9 for a description and analysis the CDRP Variant.

With respect to the third point, the SFPUC does not plan to monitor flow into the diversion tunnel at the ACDD. As described in the EIR, the compliance point for the flow schedules for resident trout and steelhead that are a part of the Draft EIR project would be at the existing USGS gage on Alameda Creek downstream of the Alameda Creek/Calaveras Creek confluence and the existing gage on Calaveras Creek downstream of Calaveras Dam. With the CDRP Variant, the flow schedules for resident trout and steelhead that were part of the Draft EIR project would be replaced by the proposed instream flow schedules included in the Variant (see Chapter 9 for more information). Compliance with the proposed instream flow schedules in the Variant would be monitored using data at two gages, an existing USGS gage on Calaveras Creek below Calaveras Dam and a new gage on Alameda Creek downstream of the ACDD. The amount of water diverted into the diversion tunnel could be calculated by subtracting the records of the gage on Alameda Creek below the ACDD from the records of the gage above the ACDD. USGS gage records, including data from the gages referred to above, are public information and are available on the internet. Please also refer to the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.3, Diversions and Streamflow, under the sub-section entitled "Releases from Calaveras Dam and the ACDD" for additional information.

O-ACA&CBD1-107 The comment refers to changes in flow downstream of the ACDD available to support fish spawning habitat caused by implementation of the CDRP.

The commenter's assertion that the Draft EIR project would "dramatically decrease the flows in Alameda Creek downstream of the ACDD compared to baseline conditions" is incorrect, as shown in Table 4.6-19 of the EIR (Vol. 1, Chapter 4, Section 4.6.2.3, page 4.6-82). In fact, the Draft EIR project would increase average annual flow in Alameda Creek downstream of the ACDD by 7 percent compared to the existing condition. It would also provide flow in the creek below the ACDD in some winter months when under the existing condition the creek is dry except for seepage through the ACDD. These increased flows would benefit fish habitat. Also see the master response presented in Section 10.3, Hydrology, Section 10.3.3, Diversions and Streamflow, and the sub-section entitled "Flows Downstream of the ACDD" for additional information regarding this topic.

The CDRP Variant includes installation of a fish screen at the upstream end of the diversion tunnel at the ACDD, construction of a fish ladder to provide passage for fish upstream and downstream of the ACDD, and proposed instream flow schedules for resident trout and for steelhead, which replace the corresponding flow schedules that were in the Draft EIR project. These three features are intended to improve fish habitat and would result in an increase in the average annual flow in Alameda Creek below the ACDD compared to the values for the Draft EIR project described in the EIR. Average annual flow in Alameda Creek downstream of the ACDD with the CDRP Variant would be 29 percent greater than under the existing condition. The impact conclusions in the EIR for the CDRP Variant with respect to hydrology and fisheries would be the same as the impact conclusions for the Draft EIR project, although the CDRP Variant would improve conditions for native fishes compared to the Draft EIR project (resulting in a beneficial impact). Please see Chapter 9, Section 9.3 for estimates of the effects of the CDRP Variant on flow in Alameda Creek below the ACDD.

O-ACA&CBD1-108 The comment states the analysis in Impact 4.5.5 of "more predictable and stable" flows is not necessarily beneficial to fish, that flows should mimic the natural hydrograph.

Please refer to Response O-ACA&CBD1-76 regarding use of the terms "stable" and "reliable" to describe flow conditions for analyzing impacts on fisheries. Refer to Response O-Acterra et al.-16 regarding flows that mimic the natural hydrograph.

O-ACA&CBD1-109 The comment claims that the statement in the Draft EIR (page 4.5-62, Vol. 1, Chapter 4, Section 4.5.2.3) that, "Over all years, flows would increase on an average annual basis," is inaccurate. The statement refers to the effect of the Draft EIR project on flow in Alameda Creek below the ACDD. Contrary to the commenter's assertion, the statement is accurate. As shown in Table 4.6-19 of the EIR (Vol. 1, Chapter 4, Section 4.6.2.3, page 4.6-82) flow in Alameda Creek downstream of ACDD averaged over all years would increase by 652 acre-feet per year compared to the existing condition. The increase in diversions attributable to the restoration of capacity in Calaveras Reservoir is more than offset by the flow bypasses proposed under the CDRP. Please also refer to the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.3, Diversions and Streamflow, for additional information.

The CDRP Variant would increase flow in Alameda Creek below the ACDD by an average of 2,530 AFY compared to the existing condition. Please see Chapter 9, Section 9.3 for detailed estimates of the effects of the CDRP Variant on flow in Alameda Creek below the ACDD.

O-ACA&CBD1-110 The comment objects to the statement in the EIR (Vol. 1, Chapter 4, Section 4.5.2.3, page 4.5-64, second paragraph) that, “The bypass flows would occur whenever streamflow is naturally present and therefore would provide more stable and reliable habitat compared to the existing condition, which provides variable flow with no bypasses.” The statement in the EIR is accurate for the reasons noted below.

Under pre-2001 conditions, the SFPUC opened the gates on the diversion tunnel at the ACDD at the beginning of the rainy season and typically did not close them again until the end of the rainy season. As a result, all rainy season flow in the creek below 650 cfs was diverted into the tunnel. Flow in excess of 650 cfs spilled over the ACDD and flowed down Alameda Creek. Except during brief, high flow conditions, the only flow in Alameda Creek below the diversion dam during the rainy season was a small amount of seepage through the diversion dam.

From 2002 until October 2005, the date of the notice of preparation for the CDRP EIR, there was no regular pattern of operation for the gates on the diversion tunnel. The gates were open for a considerable proportion of the 2002-2003 rainy season and for the entire 2003-2004 rainy season. During these times, all flow up to 650 cfs was diverted to Calaveras Reservoir and, except during brief, very high flow conditions, the only flow in Alameda Creek below the diversion dam was a small amount of seepage through the diversion dam.

The Draft EIR project described in the EIR includes the construction of a bypass facility at the ACDD and bypass flows based on the flow schedule for resident trout established in the 1997 MOU (Vol. 1, Chapter 3, Section 3.6.5, pages 3-66 – 3-69). Additional flows, up to 10 cfs, would be bypassed to support steelhead once steelhead gained access to the watershed (Vol. 1, Chapter 3, Section 3.6.6, pages 3-69 and 3-70). The SFPUC would meet the proposed flow schedules by bypassing water at the ACDD through the new bypass tunnel whenever there is sufficient water flowing down Alameda Creek above the diversion dam to do so. Bypass of water at the ACDD would occur primarily in the rainy season. During dry periods, there is little or no flow in Alameda Creek above the ACDD and consequently there would be little or no bypass of water to the creek below the ACDD.

In the rainy season there would be some flow bypassing the ACDD most of the time and flowing down Alameda Creek below the diversion dam. This is in contrast to the existing condition where, except during very brief periods of high flow, there is no rainy season flow other than seepage in the creek below the diversion dam when the diversion tunnel gates are open, as they were in most of 2002-2003 and all of 2004. Thus, with the project, rainy season flow in the creek below the diversion dam would be continuous, except perhaps in very dry years, more stable and usually greater than it is under the existing condition. It would also be more stable and greater than under pre-2001 conditions.

The proposed instream flow schedule for the CDRP Variant includes bypass of up to 30 cfs at the ACDD whenever there is sufficient water flowing down Alameda Creek above the diversion dam. The flow schedules for the Draft EIR project included bypass of up to 10 cfs. In addition, the CDRP Variant includes installation of a fish screen on the entrance to the diversion tunnel at the ACDD which would limit diversion at the ACDD to a maximum of 370 cfs, 280 cfs less than the current maximum diversion rate. The increase in the bypass and the reduction in the maximum diversion rate would further increase flows in Alameda Creek below the ACDD dam and return them to a condition that more closely resembles the pre-development flow regime.

The comment notes that there was a reduction in total annual diversions from Alameda Creek at the ACDD after 2001 because of the loss of capacity in Calaveras Reservoir. While this is true, it does not alter the fact that rainy season flow with the Draft EIR project and the CDRP Variant would be more continuous and higher than it is under the existing condition.

The comment states that the bypass flows cannot be treated as mitigation measures for the CDRP. The bypass flows are not treated as mitigation measures in the EIR; they are part of both the Draft EIR project and the CDRP Variant.

O-ACA&CBD1-111 The comment makes two points: that the baseline for the analysis of the Draft EIR project's effects on geomorphology is inconsistent; and that the Draft EIR fails to quantify the changes in the high flow regime that would occur as a result of the Draft EIR project.

With respect to the first point, please see the master response presented in Section 10.3, Hydrology, specifically Section 10.3.4, Geomorphology, Sediment Transport, and Channel Formation, and the subsection entitled "Baseline for Geomorphology Analysis." With respect to second point, the master response includes two subsections entitled "Effects of Intermediate Flows on Channel Formation" and "Effects of Peak Flows on Channel Formation." These subsections analyze impacts on geomorphology and channel formation for a range of flows, though not specifically quantified, with intermediate flows occurring with a recurrence interval of 1.3 to 1.7 years and peak flows as shown in EIR Figures 4.6.14a and 4.6.14b (ranging up to 1,200 cfs). This level of quantification of flow is adequate for determining the significance of these impacts relative to the qualitative significance criteria (page 4.6-57) used in this analysis.

O-ACA&CBD1-112 The comment states that the Draft EIR discussion on page 4.5-66 (Vol. 1, Chapter 4, Section 4.5.2.3), Redd Scour and Erosion, implies beneficial impacts from re-operating ACDD that "don't occur" and the commenter requests that this section of the EIR be deleted.

Analysis of hydrology in Alameda Creek in Vol. 1, Sections 4.5 and 4.6 of the EIR shows that the creek flows are extremely flashy in nature with rapid increases and decreases in flows resulting from rainfall. As discussed in the EIR, these flashy flows with variable high peaks have the potential to result in scouring of redds and entrainment of eggs, which could naturally limit spawning success. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of ACDD and Calaveras Dam, for responses to comments on potential effects associated with the proposed operation of the ACDD.

O-ACA&CBD1-113 The comment states that the Draft EIR claims that "the more regular diversions and consistent bypass flows whenever flows are naturally present would be expected to contribute to improved reproductive success of those fish spawning within the reach," and the commenter states that this is completely false and unsupported (based on the commenter's assertion that the CDRP proposes reducing flows for spawning compared to the baseline).

The commenter has expressed an opinion regarding impacts, but has presented no evidence or analysis to refute the substantial evidence presented and relied upon in the EIR. Refer to Response O-ACA&CBD1-76 and also to the master response presented in Section 10.4, Fisheries, specifically Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.5, Current and Proposed Operations of ACDD and Calaveras Dam, for additional responses to comments on potential effects associated with the proposed operation of the ACDD. To the extent that this comment may be based on the commenter's assertion in other comments regarding the appropriate baseline for the project, refer to the master response presented in Section 10.2, and specifically to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and California Department of Fish and Game (CDFG), and Unimpaired Flows.

Note that the CDRP Variant includes proposed instream flow schedules that replace the flow schedules that were part of the Draft EIR project. Refer to Chapter 9 for a description of the Variant and analysis of its environmental impacts.

O-ACA&CBD1-114 The comment states that the EIR must discuss the fact that mortality of fish entrained in the diversion tunnel may be significant, and that some of these fish may be *O. mykiss* smolts that could become steelhead. The comment also states that the Draft EIR does not discuss the relationship of stream fish to anadromous steelhead populations and the conservation significance of resident rainbow trout.

The EIR (in Vol. 1, Chapter 4, Section 4.5, pages 4.5-60 – 4.5-70; and pages 4.5-39 – 4.5-45) discusses impacts associated with operation of the ACDD under the Draft EIR project and the regulatory status and the relation of resident stream fish to anadromous steelhead populations in the watershed. Regarding the potential entrainment of rainbow trout, refer to Response O-ACA&CBD1-115, below. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of ACDD and Calaveras Dam, for additional responses to comments on potential effects, including fish entrainment in the diversion tunnel, associated with the proposed operation of the ACDD.

The CDRP Variant includes fish screens at the diversion tunnel and in Calaveras Reservoir, among other fishery enhancements and project refinements. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the Variant.

O-ACA&CBD1-115 The comment states that the evaluation of entrainment at the Alameda Creek diversion tunnel essentially finds that since the trout population upstream from ACDD is "small and isolated," it is somehow not subject to protections guaranteed by environmental review processes or the state Fish and Game Code. The comment states that this section of the report should be deleted, and the project should include installing a fish screen at the ACDD [since] "that is required for diversions of this size and as mitigation for an impact with a mandatory finding of significance."

The comment is incorrect. The EIR (Vol. 1, Chapter 4, Section 4.5, pages 4.5-60 – 4.5-70, Impacts 4.5.5) provides an analysis of the Draft EIR project's effects of entrainment in the ACDD diversion tunnel on rainbow trout. As noted in the analysis, due to the general behavior characteristics of rainbow trout, the fact that they have sustained a population above ACDD over the past 70 years of diversion tunnel operation, the operation of the ACDD is expected to result in a less-than-significant impact on rainbow trout. Please also refer to Response O-ACA&CBD1-10 for additional discussion on the need to make mandatory findings of significance. Also see the master response presented in Section 10.4, Fisheries, specifically Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments on potential effects, including fish entrainment in the diversion tunnel, associated with the proposed operation of the ACDD.

Note that the CDRP Variant, described in Chapter 9, Section 9.2 of this Comments and Responses document, includes installation of a fish screen at the upstream end of the diversion tunnel at the ACDD.

O-ACA&CBD1-116 The comment faults the Draft EIR for claiming that the ETJV report "indicated that the existing hydrologic conditions appear to sustain aquatic habitat in a manner that supports a native fish community, which includes resident rainbow trout, in good condition," implying that conditions for cold water fish are good under current conditions. The comment states that the report concludes that the warm water native fish community "appears relatively healthy in the reach of Alameda Creek below the Calaveras Creek confluence," not the rainbow trout or coldwater fish.

The EIR presents an evaluation and characterization of the health of the fish community on pages 4.5-32 – 4.5-34 (Vol. 1, Chapter 4). The evaluation and characterization relies on methods described by Moyle et. al. (1998) and fish sampling data conducted over several years by SFPUC staff (summarized in ETJV 2008) and finds that the fish community appears to be in good condition given existing limiting factors (e.g., as stated on EIR pages 4.5-30 – 4.5-34 [Vol. 1, Chapter 4; see also Table 4.5.3], species distribution throughout the study reaches is variable and dependent upon a number of different factors). For example, relative abundance of rainbow trout is higher in Reach A-3 (a reach that is influenced by operations of the ACDD) than in Reaches A-4 and A-5, two reaches that are located above the ACDD and have unimpaired flow conditions. Reaches A-1 and A-2 regularly exhibit warm summer water temperatures that are not conducive to coldwater rainbow trout and therefore would not be expected to support high abundance of this species. Reach A-4, an unimpaired reach located upstream of the ACDD, had the highest proportion of roach (approximately 96 percent of all species documented).

Further, the warm-water native fish community appears relatively healthy in the reach of Alameda Creek downstream of the Calaveras Creek confluence. Without coldwater releases from Calaveras Reservoir, rainbow trout are not expected downstream of the Calaveras Creek confluence because the habitat conditions are more conducive to the lower gradient, warm-water fish community. The extent of fish habitat downstream in Sunol Valley is limited by lack of streamflow during the summer. This is similar to a natural condition, given the alluvial substrate in the valley and low summer streamflow present in both Arroyo Hondo and Alameda Creek under unimpaired conditions.

The information presented in the EIR and above supports the statements made regarding the overall health of the fish community given the limiting factors that exist in Alameda Creek watershed streams with seasonally low flows and warm water temperatures. However, to clarify, the second paragraph on page 4.5-71 is revised as follows (deleted text is shown as ~~strike-through~~ and new text is underlined):

> Based on the results of recent surveys conducted by the SFPUC in Calaveras and Alameda Creeks (see Table 4.5.3), an assessment of the existing fish community was conducted (ETJV 2008, pages 33-35) with reference to criteria developed by Moyle et al. (1998) (see Subsection 4.5.1, Setting). The assessment indicated that the existing hydrologic conditions in the reach of Alameda Creek downstream of the Calaveras Creek confluence appear to sustain aquatic habitat in a manner that supports a native warm water fish community~~, which includes resident rainbow trout,~~ in good condition.

These revisions do not change the analysis or conclusions presented in the Draft EIR.

O-ACA&CBD1-117 The comment states that the rainbow trout population in this reach of Alameda Creek below the Calaveras Creek confluence is not in good condition and that populations of native resident rainbow trout below the dams, in Alameda Creek and its tributaries in the upper Sunol Valley, are very small, with few to no trout found in most reaches in dry years.

This comment is responded to in Response O-ACA&CBD1-116, above.

O-ACA&CBD1-118 The comment reiterates the point made in Comment O-ACA&CBD1-106 that the flows called for in the 1997 MOU should be a part of the baseline or existing condition and not part of the proposed project.

Please see the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, specifically Section 10.2.3, Baseline Consideration Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) Between the San Francisco Public Utilities Commission (SFPUC) and California Department of Fish and Game (CDFG), and Unimpaired Flows, and the subsection entitled "Baseline Considerations Regarding the 1997 MOU Flows." Regarding the flow schedules proposed as part of the CDRP Variant, refer to Section 9.2 in this comments and responses document.

The comment asserts that the baseline shifts in Section 4.5. The baseline used throughout the EIR is the condition persisting in October 2005. This section makes reference to the pre-2001 condition as well as the baseline condition, but it does not treat the former as the baseline. It is useful to make reference to the pre-2001 condition because pre-2001 conditions remained stable for about 70 years and some of the environmental elements, stream channel geomorphology and fish populations for example, are more a product of that 70-year stable period than they are of the four years between the DSOD's imposition of restrictions and establishment of the baseline for the EIR.

The comment reiterates an erroneous point about the effects of the CDRP on flows in Alameda Creek below the ACDD, which was first made in Comment O-ACA&CBD1-110; refer to Response O-ACA&CBD1-110.

O-ACA&CBD1-119 The commenter states that "the hypothetical trout-death-by-cone-valve scenario culminating with 'juveniles...would inevitably die,'" is inappropriate for an environmental review document.

The discussion that is referenced in the comment refers to Impact 4.5.6 (page 4.5-75) includes analysis to support conclusions regarding operation of the cone valve and the potential for redd scour and/or fish isolation and stranding. The analysis describes a scenario that currently occurs in which there are rapid or sudden increases and/or decreases in flow releases from the cone valve at Calaveras Dam but impacts on fish, particularly juveniles, would be mitigated with proposed operations. Such a discussion is appropriate for an environmental review document where potential impacts are required to be disclosed. Please also refer to EIR Section 3.6.3 for a discussion on cone valve operations.

O-ACA&CBD1-120 Referring to the impact conclusion on page 4.5-76, the comment states that the claim that reducing in-stream flows (post-CDRP) is better for fish habitat than "leaving them higher (current conditions) is not supported." The commenter also states that the project's impacts on steelhead migration in Little Yosemite, the Sunol Valley and downstream areas, on nursery (rearing) habitat, and on channel-shaping and flushing flows must be adequately characterized and mitigated.

The impact conclusion on page 4.5-76 (Vol. 1, Chapter 4, Impact 4.5.6) does not state that reducing in-stream flows (post-CDRP) is better for fish habitat than "leaving them higher." Rather, the discussion states that implementation of the proposed flow release schedules would improve habitat conditions for native fishes and other aquatic resources when compared to the existing condition (see Vol. 1, Section 4.5, page 4.5-76). Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam and Calaveras Dam, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments on potential effects associated with the proposed operation of the ACDD and Calaveras Dam. With regard to the potential for operation of the ACDD to potentially affect fish passage at Little Yosemite, please refer to Response O-ACA&CBD1-23.

O-ACA&CBD1-121 The commenter states that protecting the Calaveras Reservoir trout population is of the utmost importance, and a plan should be developed in cooperation with CDFG that avoids unforeseen construction-period impacts.

Please refer to Responses O-ACA&CBD1-54, O-ACA&CBD1-99, O-ACA&CBD1-104, and O-ACA&CBD1-105 and to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for responses to comments regarding construction-related effects on fisheries in Calaveras Reservoir. As noted, the EIR provides a thorough analysis of construction impacts, and mitigation measures in the EIR would reduce the project's significant impacts on fisheries and aquatic habitat and water quality to less-than-significant levels. Therefore, no additional mitigation is required.

Regarding the suggestion that the SFPUC consult with CDFG about a plan to protect the reservoir trout population during construction, please note that the SFPUC is currently consulting with CDFG in accordance with that agency's authority under the Fish and Game Code, specifically Section 1602, regarding Lake and Streambed Alteration Agreement. Refer to EIR Vol. 1, Chapter 3, Section 3.7, page 3-72, for a description of this discretionary approval.

O-ACA&CBD1-122 The comment refers to Impact 4.5.8: Effects of project operations on native fish in Alameda Creek in the extended study area. The comment states that the analysis inappropriately relies on flows from other parts of the Alameda Creek watershed to minimize the effects of the proposed project on flows in Alameda Creek below Arroyo de la Laguna.

When evaluating flow at a particular location on a creek, it is appropriate to consider flow from all parts of the tributary watershed. Figure 4.6-16 (page 4.6-96, Vol. 1, Chapter 4, Section 4.6.2.3) portrays the effects of the project on flow in Alameda Creek below the Arroyo de la Laguna confluence as accurately as possible with the available analytical tools. There is no attempt to minimize the effects of the project. For more information on the effects of the project on flows in Alameda Creek below its confluence with Arroyo de la Laguna, please see the master response presented in Section 10.3, Hydrology, Section 10.3.3, Diversions and Streamflow, and specifically the subsection entitled "Flow in Alameda Creek Downstream of Arroyo de la Laguna."

Regarding the analysis of the flow schedule proposed under the CDRP Variant, refer to Section 9.3 in Chapter 9 of this Comments and Responses document.

O-ACA&CBD1-123 The comment states that the EIR must acknowledge the inconsistency of the project and its environmental review as represented in this EIR with the efforts and plans of the Alameda Creek Fisheries Restoration Workgroup and that the Workgroup has been the forum for coordinating restoration of steelhead to the watershed, and the CDRP and its EIR conflict with ongoing and planned restoration plans of the non-SFPUC members of the Workgroup.

Please refer to the master response presented in Section 10.4, Fisheries, Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and specifically the subsection entitled "SFPUC Water Enterprise Environmental Stewardship Policy and Alameda Creek Fisheries Restoration Workgroup" for responses to comments on SFPUC coordination with the Alameda Creek Fisheries Restoration Workgroup regarding recovery of steelhead in the watershed.

O-ACA&CBD1-124 The comment questions the significance determination with respect to Impact 4.6.5: Operational effects on flow in Alameda Creek downstream of the ACDD to the Calaveras Creek confluence. Please see the master response presented in Section 10.3, Hydrology, and specifically Section 10.3.3, Diversions and Streamflow, under "Flows Downstream of the ACDD." In addition, see Chapter 9 for a description and analysis of the CDRP Variant, including analysis of flow changes that would result from implementation of the CDRP Variant, which includes a revised instream flow schedule, installation of a fish screen at the diversion tunnel, and construction of a fish ladder at the ACDD.

O-ACA&CBD1-125 The comment states that the cumulative impacts analysis must recognize the cumulative impacts on steelhead related to water supply operations in the upper watershed and propose meaningful mitigation rather than relying on the current inaccessibility of the habitat and associated information limitations to avoid commitment to necessary flow regimes. The commenter states that an appropriate analysis of cumulative fisheries impacts would compare unimpaired and post-project flow regimes, applying relevant (and available) standards of impairment, and proposing post-project flows that account for the habitat needs of all life stages of steelhead.

The analysis provided in Vol. 2, Chapter 6 and Vol. 3, Appendix J of the EIR necessarily relies on a number of assumptions regarding cumulative projects, and associated future conditions after these projects have been implemented, and is adequate under CEQA.

As a result of the uncertainties regarding the future conditions that would result from implementation of the future cumulative projects, the SFPUC would continue to coordinate with the other project proponents, resource agencies, water resource management entities, and other stakeholders during the development and implementation of these future projects to better understand how the CDRP would affect streamflow and other habitat conditions for steelhead. In addition, because steelhead are not currently present in the upper Alameda Creek watershed, important information about specific steelhead migration behavior in the watershed is limited. As a result, additional monitoring will be required after steelhead have regained access to the upper watershed to fully understand the specific migration requirements for steelhead in Alameda Creek such as timing and specific triggers for migration under varying water year conditions.

Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments on potential cumulative effects on steelhead in the future and the SFPUC's proposed monitoring and adaptive management strategy.

The commenter is incorrect regarding use of unimpaired conditions to analyze cumulative impacts. Please refer to the master response presented in Section 10.2, and specifically Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU), and Unimpaired Flows, regarding the appropriate baseline for cumulative impacts, and to Response O-ACA&CBD1-09 regarding "standards of impairment."

The CDRP Variant includes revised flows schedules and a comprehensive AMIP among other fishery enhancements and project refinements. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis (including analysis of cumulative impacts) of the Variant.

O-ACA&CBD1-126 The commenter states that while 1997 MOU-related flow releases will begin to provide spawning and rearing opportunities in relatively small portions of the SFPUC-operations-affected areas, as proposed they will not mitigate the cumulative effects of the CDRP and other related SFPUC water supply projects such as the Upper Alameda Creek Filter Gallery Project to less-than-significant levels. The commenter also states that the Final EIR must acknowledge these significant unavoidable impacts or, preferably, reduce the impact level through new flow provisions.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments on potential project cumulative effects on steelhead in the future and the SFPUC's proposed monitoring and adaptive management strategy. Chapter 6 of the EIR (Vol. 2) analyzes the contribution of the Draft EIR project to cumulative effects, which include those of the Upper Alameda Creek Filter Gallery Project and other past, present and reasonably foreseeable future projects in the Alameda Creek watershed. As the analysis indicates, with implementation of the identified mitigation measures the contribution of the CDRP to cumulative impacts on fisheries and aquatic resources would be less than cumulatively considerable. The San Francisco Planning Department disagrees with the assertion that the project's contribution to cumulative impacts on steelhead is significant and unavoidable based on the analysis presented in EIR Chapter 6.

As noted previously, the CDRP Variant includes a new proposed instream flow schedule (see Chapter 9 of this Comments and Response document).

O-ACA&CBD1-127 The comment notes that several documents referenced in the Draft EIR that were not included in its appendices were not available at the Planning Department.

Upon receipt of this information, MEA promptly contacted the Alameda Creek Alliance concerning availability of the referenced documents. To ensure that this information was provided, MEA mailed copies of the referenced documents to the Alameda Creek Alliance on February 22, 2010. The referenced documents also have been placed in the Planning Department's files and are available for review.

O-ACA&CBD1-128 This comment is a letter, prepared by the Alameda Creek Alliance, that was incorporated by reference into submittal O-ACA&CBD1. The letter was originally submitted as part of the scoping process for the WSIP PEIR. The WSIP PEIR is available at the San Francisco Planning Department and on the Planning Department's website: http://www.sf-planning.org/index.aspx?page=1829; refer to Case No. 2005.0159E, SFPUC WSIP Final PEIR. Appendix A of the WSIP PEIR, contained in Vol. 5 of that document, is the Scoping Report, which summarizes comments received during the public scoping process including those presented in this letter. As indicated in Appendix A of the WSIP PEIR, issues raised during the public scoping process helped PEIR preparers to identify potentially significant impacts that should be studied in the PEIR and alternatives and mitigation measures that should be considered in the PEIR. Issues related to the CDRP that were raised in this letter either were addressed in the PEIR, the CDRP EIR or were reprised in the O-ACA&CBD1 comment submittal (in some cases, all of the above).

O-ACA&CBD1-129 This comment is a letter that was submitted in association with development of the WSIP. In the letter, the Alameda Creek Alliance proposes that the following elements be added to the purpose of the CDRP project: keep native fish populations in good condition, restore lost habitat for steelhead, and restore ecosystem function below SFPUC diversions. These issues are reprised in Comment O-ACA&CBD1-01 (among others), and are addressed in the master response presented in

Section 10.4, Fisheries, specifically Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals.

O-ACA&CBD1-130 This comment is a letter that was originally submitted by the Alameda Creek Alliance on the WSIP Draft PEIR, to which formal responses are available at San Francisco Planning Department and on the Planning Department's website: http://www.sf-planning.org/Modules/ShowDocument.aspx?documentid= 8035. This web address is for WSIP PEIR Volume 7b, Responses; see Section 15.4, Groups, pages 15.4.1 – 15.4-18 (responses to PEIR comment letter SI_ACA1) for responses to this letter.[2]

The issues raised in specific aspects of this comment delineated as O-ACA&CBD1-130a through O-ACA&CBD1-130f address the CDRP. These comments were reprised in other comments in submittal O-ACA&CBD1 and are addressed in the locations shown in Table 11.2.4-1 below.

O-ACA&CBD1-131 This comment is a letter that was originally submitted by the Alameda Creek Alliance regarding certification of the WSIP PEIR. The issues raised in this comment were addressed in a memorandum dated October 30, 2008, to President Olague and Members of the Planning Commission from Diana Sokolove, San Francisco Planning Department. The issues raised in this comment were reprised in other comments in submittal O-ACA&CBD1 and are addressed in the locations shown in Table 11.2.4-2 below.

O-ACA&CBD1-132 This comment is a letter that was originally submitted by the CDFG on the WSIP Draft PEIR, to which formal responses are available at the San Francisco Planning Department and at the Planning Department's website: http://www.sf-planning.org/Modules/ShowDocument.aspx?documentid=8015. This web address is for WSIP PEIR Volume 7a; refer to Section 15.2, State Agencies, pages 15.2-4 – 15.2-17 (responses to PEIR comment letter S_CDFG2) for the responses to this letters.

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[2] The entire WSIP PEIR is available at http://www.sf-planning.org/index.aspx?page=1829; refer to Case No. 2005.0159E, SFPUC Water System Improvement Final Program EIR.

Table 11.2.4-1: Locations of Responses to Comment O-ACA&CBD1-130a through f

Comment 130	Issue	Also Raised in Comment	Where Addressed in this Document
a	Flow related effects on fish and habitat; legality of current operations.	O-ACA&CBD1-4 O-ACA&CBD1-19 O-ACA&CBD1-20 O-ACA&CBD1-21 O-ACA&CBD1-22	Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and/or individual responses to the comments at left.
b	Federal Endangered Species Act Section 7 consultation with NMFS; reasonably foreseeable impacts on steelhead and other anadromous fish.	O-ACA&CBD1-04 O-ACA&CBD1-09 O-ACA&CBD1-10 O-ACA&CBD1-14 O-ACA&CBD1-24 O-ACA&CBD1-25	Section10.4.7, Future Cumulative Analysis of Effects on Steelhead, and/or individual responses to the comments at left.
c	Consideration of impacts on bay checkerspot butterfly, Berkeley kangaroo rat, San Joaquin kit fox; and construction impacts on Calaveras Reservoir species (CRLF, CTS, Alameda whipsnake, and landlocked steelhead/rainbow trout). Make species surveys and reports publicly available.	O-ACA&CBD1-26 O-ACA&CBD1-30 O-ACA&CBD1-62 O-ACA&CBD1-127 A-CDFG-15, 25, 27 A-CDFG-28 A-CDFG-29	Section 10.4.4, Construction Related Effects on Calaveras Creek and Calaveras Reservoir, and/or individual responses to the comments at left (regarding reservoir species). Individual response O-ACA&CBD1-127 (regarding surveys and reports). All other issues raised in this comment are addressed in the EIR.
d	Inadequate mitigation for construction and operation impacts on steelhead, Chinook salmon, Pacific lamprey.	O-ACA&CBD1-5 O-ACA&CBD1-13 O-ACA&CBD1-35 O-ACA&CBD2-49	Sections 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir; 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; and 10.4.6, Other Anadromous Fish Species in Alameda Creek; and/or individual responses to the comments at left.
e	Inadequate mitigation for impacts on special status butterflies, burrowing owls, and San Joaquin kit fox. Also, some replacement ratios are inadequate.	O-ACA&CBD1-5 O-ACA&CBD1-64	Individual responses to the comments at left. All other issues raised in this comment (not raised in the CDRP comments at left) are addressed in the EIR.
f	Insufficient information to claim mitigations will reduce impacts to less than significant levels; failure to provide information on issues raised by CDFG regarding project impacts on fish and habitat.	A-CDFG-2	Sections 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and/or individual response to the comment at left.

Table 11.2.4-2: Locations of Responses to Comment O-ACA&CBD1-131

Issue	Also Raised in O-ACA&CBD1 Comment	Where Addressed in this Document
Reliance on inadequate flows based on the 1997 MOU	O-ACA&CBD1-3 O-ACA&CBD1-11 O-ACA&CBD1-91 O-ACA&CBD1-117 O-ACA&CBD1-126	Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and/or individual responses to the comments at left.
Reliance on speculative and uncertain HCP to mitigate impacts to steelhead	O-ACA&CBD1-66 O-ACA&CBD1-86	Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and/or individual responses to the comments at left.
Dam operations in violation of state wildlife laws: Fish and Game Code Section 5937	O-ACA&CBD1-20 O-ACA&CBD1-22 O-ACA&CBD1-45	Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and/or individual responses to the comments at left.
Mitigation of ACDD diversion tunnel operation is meaningless	O-ACA&CBD1-4 O-ACA&CBD1-49	Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and/or individual responses to the comments at left.
Inadequate minimum flows for resident trout (both steelhead and rainbow trout)	O-ACA&CBD1-10 O-ACA&CBD1-42 O-ACA&CBD1-117	Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and/or individual responses to the comments at left.
Diversion Restrictions mitigation (MM 5.4.5-3b) would continue illegal diversions	O-ACA&CBD1-43- O-ACA&CBD1-46 O-ACA&CBD1-50	Section 10.4.5, Current and Proposed Operations of ACDD and Calaveras Dam, and/or individual responses to the comments at left.
Inadequate and flawed science used to support significance determinations; use of unpublished studies	O-ACA&CBD1-36 O-ACA&CBD1-127	Individual responses to the comments at left.
Omission from PEIR of fisheries protection plans requested by CDFG	O-ACA&CBD1-54	Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and/or individual response to the comment at left.
Proposed mitigation requirements	O-ACA&CBD1-10 O-ACA&CBD1-14 O-ACA&CBD1-49 O-ACA&CBD1-62 - O-ACA&CBD1-66	Sections 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir; 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; 10.4.6, Other Anadromous Fish Species in Alameda Creek; and 10.4.7, Future Cumulative Analysis of Effects on Steelhead; and/or individual responses to the comments at left. All other issues raised in this comment are addressed in the EIR.

The issues raised in specific aspects of this comment delineated as comments O-ACA&CBD1-132a through O-ACA&CBD1-132e were reprised other comments in submittal O-ACA&CBD1 and are addressed in the locations shown in Table 11.2.4-3 below.

Table 11.2.4-3: Locations of Responses to Comment O-ACA&CBD1-132a through e

Comment 132	Issue	Also Raised in Comment on the CDRP Draft EIR	Where Addressed in this Document
a	Streambed alteration agreement (SAA) required for diversion at the ACDD pursuant to Fish and Game Code Section 1600.	A-CDFG-36	Individual response to the comment at left.
b	Regarding flows agreed to in 1997 MOU: in light of downstream improvements; adequate flows for steelhead and other species need to be reassessed	A-CDFG-2 O-ACA&CBD1-3 O-ACA&CBD1-20 O-ACA&CBD1-45	Sections 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and/or individual response to the comment at left. All other issues raised in this comment are addressed in the EIR.
c	Provide sufficient bypass flows to support CRLF and foothill yellow-legged frog (FYLF); provide adequate flows for steelhead as downstream barriers are removed or retrofitted	A-CDFG-2 A-CDFG-16 A-CDFG-25 O-ACA&CBD1-89 O-ACA&CBD1-45	Sections 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and/or individual response to the comment at left.
d	Recommends contingency mitigation to address impacts on resident trout, CRLF, and FYLF populations; screen ACDD diversion tunnels concurrently with CDRP implementation	A-CDFG-2 A-CDFG-8 A-CDFG-11 A-CDFG-12 O-ACA&CBD1-43 O-ACA&CBD1-50 O-ACA&CBD1-52	Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and/or individual response to the comment at left.
e	Reevaluate mitigation that allows diversion of all early winter storms; conduct hydrologic studies to determine adequate flow during various water years for resident native fish, CRLF, and FYLF.	A-CDFG-2 A-CDFG-10 A-CDFG-11 A-CDFG-16 O-ACA&CBD1-40 O-ACA&CBD1-44 O-ACA&CBD1-46 O-ACA&CBD1-89	Sections 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and/or individual response to the comment at left.

O-ACA&CBD1-133 This comment is a letter that was originally submitted by the Alameda County Water Department (ACWD) on the WSIP Draft PEIR, to which formal responses are available at the San Francisco Planning Department and the Planning Department's website: http://www.sf-planning.org/Modules/ShowDocument.aspx?documentid=8015. This web address is for WSIP PEIR Volume 7a, Responses; refer to Section 15.3, Local and Regional Agencies, pages 15.3-8 – 15.3-10 (responses to PEIR comment letter L_ACWD) for responses to this letter.

The issues raised in specific aspects of this comment delineated as O-ACA&CBD1-133a and O-ACA&CBD1-133b were reprised in the December 17, 2009, ACWD comment letter on the CDRP DEIR (submittal A-ACWD) and are addressed in the locations shown in Table 11.2.4-4 below.

Table 11.2.4-4: Locations of Responses to Comment O-ACA&CBD1-133a through b

Comment 133	Issue	Also Raised in Comment on the CDRP Draft EIR	Where Addressed in this Document
a	Quantity of water recaptured Potential hydrology and water quality impacts on the Niles Cone Groundwater Basin Potential impacts on ACWD's downstream water intakes; need for immediate notification of spill or discharge Potential water quality impacts from dewatering and other construction related activities; need for notification of discharges due to failure of control measures.	A-ACWD-2 A-ACWD-3 A-ACWD-7 A-ACWD-10	Sections 10.3.5, Water Supply Impacts, and 10.3.6, Cumulative Impacts, and/or individual responses to the comments at left. All other issues raised in this comment are addressed in the EIR.
b	Potential unexpected changes in flow or release of contaminates require coordinated notification plan Documenting flow change does not mitigate downstream flow change impacts.	A-ACWD-8 A-ACWD-10	Individual responses to the comments at left.

O-ACA&CBD1-134 to -138: These comments are letters, incorporated by reference into submittal ACA&CBD1, that were submitted as part of the scoping process for the CDRP EIR. The scoping process is described in Vol. 3, Appendix B, of the CDRP EIR. These letters were prepared by the Alameda Creek Alliance (O-ACA&CBD1-134-136), CDFG

(O-ACA&CBD1-137), and NMFS (O-ACA&CBD1-138) and are included in CDRP EIR Appendix B (scoping comment letters No. 3, 4, 5, 9, and 18, respectively). As indicated on page 4 of EIR Appendix B, issues raised during the public scoping process helped EIR preparers to identify potentially significant impacts that should be studied in the EIR and alternatives and mitigation measures that should be considered in the EIR. Many of the issues raised in these letters are reflected in the CDRP EIR. Also refer to the main letter submitted by the Alameda Creek Alliance and Center for Biodiversity on the Draft EIR (O-ACA&CBD1 comments 1-127), the letter submitted by the CDFG on the Draft EIR (A-CDFG) (which explicitly reiterates aspects of the NOP scoping comments in comment A-CDFG-2), and the corresponding responses.

O-ACA&CBD1-139 to -144: These comments are letters, incorporated by reference into submittal O-ACA&CBD1, that are associated with the consultation process under Section 7 of the Federal Endangered Species Act for the CDRP (refer to EIR Vol. 1, Chapter 3, Section 3.7.3, page 3-73 for a description of the Section 7 consultation process). Three of the letters are from NMFS regarding consultation on the Section 7 process and are addressed to the U.S. Army Corps of Engineers (the federal lead agency for compliance with the National Environmental Policy Act); the other three letters (one from the Alameda Creek Alliance, one from the Alameda County Water District, and one from NMFS) contain comments on the administrative draft Biological Assessment prepared for the CDRP as part of the Section 7 consultation process. (Note that the Biological Assessment was subsequently changed substantially.) None of these letters directly address the CDRP EIR. The Section 7 consultation process is a separate, federal permitting process, and federal agencies are not Responsible or Trustee agencies under CEQA.

Regarding the Section 7 consultation process with NMFS, refer to the master response in 10.4, Fisheries, m Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and specifically to the subsection entitled “FESA Section 7 Consultation with NMFS.”

Pursuant to Section 2081 of the State Fish and Game Code, CDFG must issue a letter of concurrence that the Biological Opinions issued by NMFS and USFWS (in compliance with FESA) also adequately covers species listed under state Endangered Species Act. As a responsible and trustee agency under CEQA, CDFG must rely on the EIR to issue its Lake and Streambed Alteration Agreement and to prepare its letter of concurrence.

References

EDAW & Turnstone Joint Venture (ETJV). 2008. *Calaveras Dam Replacement Project, Fisheries Technical Report 2008.* Prepared by Hagar Environmental Science and Thomas R. Payne and Associates for EDAW & Turnstone Joint Venture and SFPUC.

Modesto Irrigation Dist. v. Gutierrez, 619 F. 3d 1024 (9th Cir. 2010).

U.S. Fish and Wildlife Service and National Marine Fisheries Service (USFWS and NMFS). 1998. Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act 4-34. March 1998.

11.2.5 LIPPE GAFFNEY WAGNER LLP, REPRESENTING THE ALAMEDA CREEK ALLIANCE AND THE CENTER FOR BIOLOGICAL DIVERSITY, BRIAN GAFFNEY, 12/21/09

Note to Reader: After the Draft was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

O-ACA&CBD2-01 The comment states that the Draft EIR Project Description does not specify whether Calaveras Reservoir would be drained during construction.

Calaveras Reservoir would not be drained during construction of the replacement dam. As stated on EIR page 3-33 (Vol. 1, Chapter 3, Section 3.5.1.1, Use of the Existing Dam as the Cofferdam), "[t]he new dam would be constructed at the downstream toe of the existing dam (see Figure 3.7). The existing dam would function as a cofferdam during construction of the replacement dam and would also provide 100-year storm flood protection during construction while allowing the reservoir to remain at its current operating level."

EIR page 3-62 (Vol. 1, Chapter 3, Section 3.5.6, Operation of the Reservoir During Construction), states that during construction "the reservoir would continue to operate in a manner similar to the current restricted operations, with the water level maintained between Elevation 690 and 705 feet."

Thus, the EIR indicates that the reservoir would not be drained, and explains that water levels would remain similar to existing conditions.

O-ACA&CBD2-02 The comment states that the Draft EIR does not disclose the volume and timing of operation-phase water diversions that would be split among the Sunol Valley Water Treatment Plant (SVWTP), San Antonio Reservoir, or released into Calaveras Creek, or on what criterion the SFPUC will make such decisions.

Proposed operations of the completed CDRP are described in the EIR, beginning on page 3-63 (Vol. 1, Chapter 3, Section 3.6, Project Operation).

As stated in the various subsections of Section 3.6, the reservoir would be operated similar to previous operations prior to the Department of Safety of Dams (DSOD) restrictions put in place in 2001, with water supply withdrawals as needed to meet customer demand and with adjustments for drought conditions, operation of other elements of the SFPUC water system, and other factors; in addition to the flow release schedules proposed to improve habitat conditions for native fishes and other aquatic resources (see Sections 3.3.5 and 3.3.6 on EIR pages 3-66 through 3-70). (The proposed instream flow schedule for the CDRP Variant is described in Chapter 9, Section 9.2.5 of this comments and responses document.)

Water supply withdrawals to the SVWTP and San Antonio Reservoir under existing and pre-DSOD restriction conditions are described on EIR page 3-19 (Vol. 1, Chapter 3, Section 3.3), with information also provided on EIR page 3-7 (Vol. 1, Chapter 3, Section 3.2). Because the Calaveras Reservoir would be operated in a similar manner after CDRP completion, the water supply withdrawal information provided on page 3-19 would also apply to post-project operations.

O-ACA&CBD2-03 The comment refers to a statement on page 3-65 of the Draft EIR (Vol. 1, Chapter 3, Section 3.6) that, "There would be a decrease in average annual diversions from Alameda Creek compared to diversions under current DSOD-restricted conditions…" and faults the Draft EIR for not disclosing the volume of the diversions.

The magnitude of the change in diversion from Alameda Creek is disclosed in the EIR in the discussion of Impact 4.6.5 (Vol. 1, Chapter 4, Section 4.6, pages 4.6-76 – 4.6-87). A comparison of flows in Alameda Creek downstream of the ACDD with and without the proposed project can be found in Tables 4.6.18 and 4.6.19 in the EIR (pages 4.6-81 and 4.6-82). In particular, Table 4.6.19 shows that overall, after implementation of the Draft EIR project, an additional approximately 652 acre-feet per year (AFY) would bypass the ACDD relative to existing conditions.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, as well as construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an Adaptive Management Implementation Plan (AMIP). These enhancements were developed in close coordination with the National

Marine Fisheries Service (NMFS) and California Department of Fish and Game (CDFG). Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. A comparison of flows in Alameda Creek downstream of the ACDD under existing conditions and with the CDRP Variant can be found in Table 9.17 (Chapter 9, Section 9.3). Table 9.17 shows that overall, after implementation of the CDRP Variant, an additional approximately 2,530 AFY would bypass the ACDD relative to existing conditions.

The statement in the Draft EIR referred to in the comment is misplaced in the Project Description section of the EIR because it refers to an impact of the proposed project. It is part of a paragraph that should be modified to better convey the intended information. Therefore, the fourth paragraph beginning on page 3-64 is deleted (deletions are shown in ~~strike-through~~).

> ~~The ACDD would be operated similar to pre-DSOD restriction conditions, namely, the diversion gates would be opened at the beginning of the wet season and closed at the beginning of the dry season. However, the SFPUC will prepare an ACDD Operations Plan, as part of the CDRP, which directs that the diversion dam and tunnel be operated to pass flows down Alameda Creek when diversion of those flows is not required to maintain desired levels in Calaveras Reservoir. There would be a decrease in average annual diversions from Alameda Creek compared to diversions under current DSOD-restricted conditions; as further discussed under Sections 3.6.5, Resident Rainbow Trout Releases, and Section 3.6.6, Steelhead Flow Releases, below, flows to support native fishes would be provided through the proposed ACDD bypass tunnel whenever flow is available in upper Alameda Creek. Additional releases from Calaveras Reservoir to support native fishes would also occur pursuant to the 1997 Memorandum of Understanding (MOU) during periods when colder water is needed in Alameda Creek and when flows are not available at the ACDD. (See further discussion in Section 4.6, Hydrology.)~~

The deleted paragraph is replaced with the following paragraph, applicable to the Draft EIR project, (new text is underlined):

> Currently, with DSOD restrictions in place, the gates on the diversion tunnel at the ACDD are not opened on a set schedule. Depending on hydrological/meteorological conditions, the gates could be opened in the fall or winter, then closed again in the winter or spring. In 2005 and 2006

there were no diversions at the ACDD. With the proposed project in place, operation of the gates would change. As part of the CDRP, the SFPUC will prepare an ACDD Operations Plan, which will direct that the diversion dam and tunnel be operated to pass flows down Alameda Creek whenever diversion of those flows is not required to achieve the target storage in Calaveras Reservoir. Also, as part of the CDRP, the SFPUC would make releases from the ACDD and Calaveras Reservoir to support native fishes and other aquatic resources. Releases to support resident trout consistent with the 1997 MOU, and as described in Section 3.6.5, Resident Rainbow Trout Releases, would commence once the CDRP is completed. Releases to support steelhead, as described in Section 3.6.6, Steelhead Flow Releases, would commence once downstream barriers to steelhead migration are removed and steelhead have regained access to the upper Alameda Creek watershed. The releases to support native fishes would be made from the ACDD whenever there is sufficient flow present in upper Alameda Creek, and otherwise would be made from Calaveras Reservoir. Consistent with the 1997 MOU, releases may also be made from Calaveras Reservoir when cold water from the reservoir pool is needed in Alameda Creek to support aquatic resources, such as during the summer when creek water temperatures would be elevated.

The CDRP Variant includes revised flow schedules, as well as construction of a fish ladder at the ACDD and installation of fish screens at the Alameda Creek diversion tunnel. These elements of the CDRP Variant directly influence operation of the ACDD and Calaveras reservoir. Please refer to Chapter 9, Section 9.3 of this Comments and Responses document for a description of the proposed instream flow schedule and operation of the Calaveras Reservoir and ACDD under the CDRP Variant.

O-ACA&CBD2-04 The comment refers to a statement on page 3-65 of the EIR (Vol. 1, Chapter 3, Section 3.6) that, "Additional releases from Calaveras Reservoir to support native fishes would occur pursuant to the 1997 MOU during periods when colder water is needed in Alameda Creek, and when flows are not available at the ACDD." The comment claims no evidence is offered that the releases would indeed support native fish.

This section of the EIR describes the proposed project and notes that water would be bypassed at the ACDD and released from Calaveras Reservoir for the benefit of native fish as part of the CDRP. The impact analysis in EIR

Section 4.5, Fisheries and Aquatic Habitat (Vol. 1, Chapter 4, Section 4.5, pages 4.5-54 – 4.5-82) contains an examination and conclusions with respect to the effects of the proposed project on native fish and identifies the benefits provided by the proposed flow bypasses and releases. For further information and analysis regarding releases from Calaveras Dam, bypasses at the ACDD, overall flow schedules, and the ability of these flow schedules to support native fish, please refer to the master response presented in Section 10.4, Fisheries, Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant (in particular, the section titled "Basis for Development of the Flow Schedule") and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam.

The comment also asserts that the Draft EIR does not provide dates when the MOU releases would commence, identify the timing of when "periods of colder water is needed in Alameda Creek," or the timing of "when flows are not available at the ACDD."

The 1997 MOU between the SFPUC and CDFG is described in more detail on EIR pages 3-66 – 3-69 (Vol. 1, Chapter 3, Section 3.6). The entirety of the 1997 MOU is provided in Appendix H (Vol. 3). The description of the 1997 MOU on pages 3-66 – 3-69 is not clear regarding when the 1997 MOU flow releases would commence. Implementation of the proposed releases would occur as part of the CDRP operations, and begin immediately after construction is complete. The last paragraph on page 3-66 is modified to read as follows (deletions are shown in ~~strike-through~~ and new text is underlined):

> "…however, releases from Calaveras Dam still would be required to meet flow and temperature requirements, particularly in summer. The flow schedule for resident fish and aquatic resources described in Section 3.6.5 of the EIR would be implemented immediately after project construction is complete. To meet the MOU total flow of 6,300 AFY,…"

Regarding the portion of the comment referencing "periods when colder water is needed in Alameda Creek" and "when flows are not available at the ACDD," these issues are also discussed in the MOU description on EIR pages 3-66 – 3-69. During periods when flow is low in Alameda Creek and water temperature becomes high enough to threaten the survival of cold water fisheries, it may be desirable to release water from Calaveras Reservoir rather than bypass flows at the ACDD to meet the flow schedules for native fish in Alameda Creek below its confluence with Calaveras Creek. As called for in the MOU there would be a pool of cool water at depth in Calaveras Reservoir and, consequently, water released from the reservoir in the summer is likely to be cooler than surface flows bypassed from the ACDD.

Because the ACDD is a diversion dam and does not impound significant volumes of water, bypasses to meet flow schedules for native fish can only be made from the ACDD when sufficient flow is reaching the ACDD from the upper watershed. When sufficient flow is not available in Alameda Creek, releases would be made from Calaveras Reservoir to meet the flow schedules.

Regarding the CDRP Variant, the proposed instream flow schedule replaces the flow schedule associated with the 1997 MOU. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The CDRP Variant and the Draft EIR project are both addressed in the master response sections referenced above.

O-ACA&CBD2-05 The comment requests detailed information on the total amount of water that would be released to meet flow schedules for native fish and the respective amounts that would be released from the ACCD and Calaveras Reservoir.

Please refer to the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.3, Diversions and Streamflow, and the subsection entitled "Fisheries Releases from Calaveras Dam and the ACDD," for the requested information.

O-ACA&CBD2-06 The comment asserts that the Draft EIR does not fully disclose the location of new haul roads that will be used during construction. The comment notes that the location of the west haul road is provided, but indicates that location information for other haul roads is absent. The comment indicates that without sufficient information on haul roads, the EIR cannot fully analyze project impacts on terrestrial plant and animal species as well as the water quality impacts of proposed submergence of roads when the reservoir is filled.

As stated on EIR page 3-33 (Vol. 1, Chapter 3, Section 3.5), "SFPUC has established a work limit area. The construction contractor would be required to work inside this area. The work limit area includes all staging, borrow, disposal, and haul road areas, as well as the dam and related-facility construction sites. The total area affected by construction of the project elements would be approximately 343 acres." The 343-acre work limit area is shown in Figure 3.8 on page 3-34 of the EIR. Proposed haul road locations are shown in Figure 3-13 on page 3-51 of the EIR. A review of these two figures shows that the proposed haul roads would be located within the defined 343-acre work limit area.

The impact analyses presented in Chapter 4 of the EIR, including Section 4.4, Vegetation and Wildlife, and Section 4.7, Water Quality, conservatively assume that construction disturbance impacts would occur within the entire 343-acre work limit area. This approach was adopted in acknowledgment of the magnitude of the CDRP construction. Thus, although Figure 3.13 may not show every haul route that would ultimately be required for the project, by assuming the entire 343-acre work area could be disturbed, the contractor can be given the flexibility to establish haul routes in the most efficient manner in the work area; the EIR fully discloses the potential environmental effects of the construction process and identifies measures to avoid or mitigate significant impacts to sensitive resources.

There are some exceptions to this approach. For example, a specific location and design has been developed for the West Haul Road. Also, in some instances, exclusion zones have been established around wetlands and other sensitive resources, and construction disturbance (including haul roads) would not be permitted in these areas. Note that the location of the West Haul Road is slightly modified under the CDRP Variant and inclusion of a proposed electrical line upgrade incrementally increases the area of construction disturbance; these changes would not substantially increase the severity of impacts disclosed in the EIR. See Chapter 9 of this Comments and Responses Document for a description of the Variant and an analysis of its environmental effects.

As noted in the comment, the SFPUC has worked closely with the U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (USFWS), CDFG, and the San Francisco Bay Regional Water Quality Control Board (RWQCB) to evaluate impacts on plant and animal species as well as water quality impacts, and to develop mitigation measures to address these impacts. The EIR fully analyzes project impacts on terrestrial plant and animal species as well as the water quality impacts of proposed haul road development and use, and the ultimate submergence of roads and other construction activity areas when the reservoir is filled.

O-ACA&CBD2-07 The comment notes that the USACE Public Notice No. 29997S describes three gradient control structures as being included as part of the proposed project, but the Draft EIR does not include gradient control structures in the project description, and there is no analysis of the impacts of such structures on fish and fish migration.

The structures, referred to herein as the Spillway Discharge Channel Grade Control Structures, are elements of the CDRP Variant's dam's spillway discharge channel and described in this Comments and Responses document in Chapter 9, Section 9.2.2, Elements of the CDRP Variant. The grade control structures were proposed to be added to the CDRP design around the time of Draft EIR publication to reduce the amount of surface area in the discharge channel that may require treatment with concrete. As explained in the CDRP Variant discussion in Chapter 9, the structures fall within the defined construction work area for the CDRP.

The potential environmental effects of these structures are evaluated in Section 9.3. The Spillway Discharge Channel Grade Control Structures do not result any new significant impacts not already addressed in the EIR or result in a substantial increase in the severity of significant effects identified in the EIR.

O-ACA&CBD2-08 The comment provides examples from the Draft EIR in which the baseline of post-DSOD-restricted conditions is not strictly used. The comment also contends that the DSOD-restricted baseline is not the proper environmental setting for analyzing impacts on fisheries and water quality, which should also include pre-DSOD conditions and pre-dam conditions. The commenter cites CEQA Guidelines Section 15125(c), stating that additional baseline comparisons are necessary to give the public, responsible agencies, and decision-makers the basis for comparison of project impacts.

For responses to the baseline issues raised in the comment as to why pre-dam conditions and, for the most part, pre-DSOD restricted conditions, are not used as the baseline, please refer to the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, and specifically to Section 10.2.2, Use of Appropriate Baselines, and Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and California Department of Fish and Game (CDFG), and Unimpaired Flows. In summary, the environmental setting at the time that the environmental review process commences is normally the physical baseline condition against which the lead agency evaluates the impact of the project. (CEQA Guidelines 15125(a).). DSOD restrictions have been in place since 2001 and will continue to be enforced until the dam is replaced and are thus appropriately considered part of the environmental baseline. For most resource issues, the current environmental setting reflects the period from 2001 when the DSOD restrictions were put in place to the present. For a few specific resource issues, such as stream channel formation, it is useful to make reference to the pre-2001 condition because pre-2001 conditions remained stable for about 70 years and present stream channel geomorphology is more a product of that 70-year stable period than it is of the years since DSOD's imposition of restrictions. Stream channel formation is a long-term process affected by streamflow and related hydrogeologic and geomorphic processes. Characterizing these processes and their effects on the baseline condition using only data from 2001 to the present (post-DSOD restricted conditions) would not accurately reflect the long-term nature of the interactions of these processes and their effects on the physical environment. Using the complete available hydrologic dataset for the last 70 years that includes years before DSOD restrictions, as done in the EIR, is the appropriate method to characterize the baseline condition in regards to stream channel formation and related processes.

O-ACA&CBD2-09 The comment states that native rainbow trout are a sensitive species and should be considered as such consistent with EIR significance criteria; it also states that the Draft EIR fails to properly analyze construction impacts within the Calaveras Reservoir on these species.

On EIR page 4.5-37 (Vol. 1, Chapter 4, Section 4.5.1.2), the reasoning is provided for considering resident rainbow trout as a special-status species, even though resident trout are not afforded any special protection by the federal or state endangered species acts, USFWS, or CDFG. Because resident rainbow trout are considered a special-status species in the EIR, impacts are assessed using the same significance criteria referenced in the comment.

Regarding the assertion that the Draft EIR fails to properly analyze the construction impacts of the CDRP on rainbow trout, the commenter has expressed an opinion but has presented no evidence or analysis in this comment to refute the substantial evidence presented and relied upon in the EIR. The comment references further discussion on this topic later in the letter (i.e., "as discussed below,"), comments such as O-ACA&CBD2-17, -18, -19, and -21 address similar issues; please refer to Responses O-ACA&CBD2-17, -18, -19, and -21 for information on the analysis of construction impacts on sensitive and special-status species.

O-ACA&CBD2-10 The comment states that the EIR should discuss all inconsistencies between the proposed project and applicable general plans and regional plans, including water quality control plans. The comment also contends that the Draft EIR fails to analyze whether and how the project conflicts with California Fish and Game Code Sections 5901 and 5937.

EIR Section 4.2, Plans and Policies (Vol. 1, Chapter 4, pages 4.2-3 – 4.2-18), addresses the project's consistency with multiple general plans and regional plans, including the general plans for San Francisco, Alameda County, Santa Clara County, City of Milpitas, and City of Fremont; the *Alameda Watershed Management Plan*; and the *East Bay Regional Park District Master Plan*. Inconsistencies with applicable water quality control plans are addressed in EIR Section 4.7, Water Quality (Vol. 2, Chapter 4, pages 4.7-25 – 4.7-75). Note that on November 2, 2009, after the Draft EIR was published, the Alameda County Community Development Agency Planning Department determined that the CDRP is consistent with the East County Area Plan (ECAP) of the Alameda County General Plan (Alameda County Community Development Agency, 2009), and in January 2010, the Alameda County Planning Commission approved conformance of the CDRP with the ECAP (Alameda County Planning Commission, 2010).

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, regarding compliance with the Fish and Game Code.

O-ACA&CBD2-11 The comment states that the Draft EIR fails to analyze whether and how the project conflicts with protective rules under Section 4(d) of FESA governing the take of listed Central California Coast steelhead trout.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding the CDRP and Section 4(d) of the FESA governing the take of listed Central California Coast steelhead trout.

O-ACA&CBD2-12 The comment states that the Draft EIR fails to analyze whether and how the project conflicts with the SFPUC Watershed Stewardship Policy.

An evaluation of the project's consistency with the Water Enterprise Environmental Stewardship Policy is provided on EIR page 4.2-17 (Vol. 1, Chapter 4, Section 4.2) in Section 4.2.5.2, Consistency with SFPUC Plans and Policies. Please refer to Response A- CDFG-10 for additional information on this topic.

O-ACA&CBD2-13 The comment states that the Draft EIR fails to analyze whether and how the project conflicts with Water Code Sections 6500, 5933, and 6020 through 6028.

The commenter presumably intended to refer to Section 6500 of the Water Code and Sections 5933 and 6020 through 6028 of the Fish and Game Code, since Sections 5933 and 6020 through 6028 are either absent from the Water Code or are not relevant to the CDRP. The CDRP EIR presents descriptions of Fish and Game Code requirements relevant to the proposed project and identifies approvals related to compliance with referenced Fish and Game Code sections in EIR Section 4.5, Fisheries and Aquatic Habitat (beginning on page 4.5-49); project approvals related to Water Code Section 6500 are identified in EIR Vol. 1, Section 3.7.3, page 3-74. A response to comments addressing project compliance with these code sections and EIR content related to code compliance is presented in the master response in Section 10.4; refer to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and specifically to the section entitled "Compliance with the Fish and Game Code."

As noted in previous responses, the CDRP Variant includes fishery enhancements, including construction of a fish ladder at the ACDD and installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-ACA&CBD2-14 The comment states that the Draft EIR does not analyze if the construction shutdowns of the Calaveras Reservoir outlet works would violate the 1991

MOU minimum cold-water pool requirement of 30,000 acre-feet in the reservoir from July through late October.

It appears that the commenter is actually referring to the 1997 MOU as the 1991 MOU does not include any information on maintaining 30,000 acre-feet of storage in Calaveras Reservoir. As described on page 3-62 of the EIR (Vol. 1, Chapter 3, Section 3.5), prior to shutdown of the outlet works, the reservoir would need to be close to Elevation 690 feet to provide safe storage capacity for inflow to the reservoir during the period when the outlet works is shutdown. The 690-foot elevation equates to approximately 25,700 acre-feet of storage. This elevation provides storage below the MOU's desired 30,000-acre-foot minimum. However, the 1997 MOU states that "SFPUC shall use best efforts to maintain 30,000 acre-feet of water storage in late summer" and allows for other storage levels for needed maintenance of the dam (see EIR Vol. 3 of the EIR Appendix H, page 8, MOU Sections 5.2 and 5.3). The MOU provides some flexibility in water storage volume, and a temporary period of storage at 25,700 acre-feet would not be inconsistent with the MOU.

In addition, as described in EIR page 3-62, the outlet works shutdowns would be initiated in mid-April of each year in which the shutdown is needed. By late summer (the time period referenced in the MOU) the reservoir elevation would be greater than 690 feet due to inflow, and the reservoir storage volume would be above 25,700 acre-feet. Lastly, the Calaveras Reservoir storage and maintenance of a cold-water pool would be restored following completion of construction of the replacement dam.

O-ACA&CBD2-15 The comment states that the Draft EIR fails to analyze how the proposed project interferes with the movement of native rainbow trout and with the use of native wildlife nursery sites. The comment correlates the provision of fish ladders and screens to compliance with Section 6500 of the Water Code and Sections 5933 and 6020–6028 of the Fish and Game Code.

Regarding effects on native rainbow trout, the commenter has expressed an opinion but has presented no evidence or analysis in this comment to refute the substantial evidence presented and relied upon in the EIR. Vol. 1, Chapter 4, Section 4.5, Impacts 4.5.3, 4.5.5, 4.5.6, 4.5.7, and 4.5.8 of the EIR specifically evaluates the project's effects on fisheries and aquatic habitat, which includes an evaluation of project-related effects on fish movement/migration and use of native wildlife nursery sites (characterized as rearing habitat in the EIR). Additionally, Vol. 2, Chapter 6, Section 6.2.3.3 and Vol. 3, Appendix J of the EIR evaluates project-related cumulative effects, including potential effects on migration and rearing for anadromous steelhead. The impact discussions address all fish species in the primary and extended study areas, which includes native rainbow trout.

Regarding effects on native wildlife nursery sites, the commenter has expressed an opinion but has presented no evidence or analysis to refute the substantial evidence presented and relied upon in the EIR. Issues such as California tiger salamander breeding ponds and bald eagle nesting sites are evaluated in Section 4.4 of the EIR (pages 4.4-1 – 4.4-117). Fish spawning requirements are addressed in Section 4.5 of the EIR (pages 4.5-1 – 4.5-82). For each fish and wildlife species addressed in the EIR impact discussions, project effects on all life stages that might take place in the project area, including early life stages that might require "native wildlife nursery sites," are evaluated (for example, see EIR Vol. 1 pages 4.5-63, 64, 66-70, 75-80).

Regarding project compliance with sections of the Fish and Game Code and Water Code, refer to the master response presented in Section 10.4, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, under the subsection entitled "Compliance with the Fish and Game Code."

As indicated in previous responses, the CDRP Variant includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-ACA&CBD2-16 The comment asserts that the Draft EIR fails to properly analyze the extent of project impacts on fish, particularly in the extended study area. The comment states that the Draft EIR provides no rationale for limiting the analysis to the primary study area and for downplaying impacts in the extended study area. The comment also asserts that the Draft EIR does not disclose how far downstream water quality impacts would reach (Impact 4.5.4), which is important as increased turbidity and increased temperature and associated reductions in dissolved oxygen would be particularly stressful to over-summering fish, including resident rainbow trout.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the basis for the delineation of the primary and extended study areas. Please refer to the master response presented in Section 10.3, Hydrology, Section 10.3.3, Diversions and Streamflow, and specifically the section "Flow in Alameda Creek Downstream of Arroyo de la Laguna," for information on the EIR analysis of aquatic impacts downstream to San Francisco Bay. Please see Response A-ACPWA-24 regarding the limited effects of the project on aquatic conditions in the lower reaches of Alameda Creek. Lastly, please refer to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, regarding construction-related impacts on fisheries and aquatic habitat.

O-ACA&CBD2-17 The comment asserts that the Draft EIR does not analyze impacts on fish as a result of the full 4-year construction phase, plus one to several additional years to fill the reservoir. The comment states that the impact analysis needs to take into account the duration of the construction phase to guide the formulation of mitigations and evaluate mitigation feasibility.

The commenter has expressed an opinion but has presented no evidence or analysis to refute the substantial evidence presented and relied upon in the EIR. Please refer to Response O-ACA&CBD1-14 for responses to comments regarding construction-related effects on aquatic habitats. Also see the discussion in Impact 4.5.4 on pages 4.5-57 – 4.5-60 of the EIR (Vol. 1, Chapter 4, Section 4.5). The first paragraph of the impact discussion lists various construction activities considered in the impact analysis. These activities encompass the entire 4-year construction period. The impact requires implementation of Mitigation Measure 5.7.1 (EIR pages 5-18 – 5-26, Vol. 2, Chapter 5, Section 5.7), which consists of multiple water quality protection measures throughout project construction. Also refer to the discussions of Impacts 4.5.5, 4.5.6, and 4.5.7 on EIR pages 4.5-60 – 4.5-78 (Vol. 1, Chapter 4, Section 4.5). Each of these impact discussions has a separate analysis specific to the period of reservoir filling.

O-ACA&CBD2-18 The comment states that the Draft EIR avoids disclosure of the significance of impacts on fish in the reservoir from construction of barge-related facilities under Haul Route Option 2, and simply states that the impacts would be temporary and mitigated.

The EIR states that turbidity from barge construction activities in Calaveras Reservoir could have a significant adverse effect on rainbow trout and other native fishes in the reservoir, but that this impact would be reduced to a less-than-significant level through implementation of Mitigation Measure 5.7.1 (Vol. 1, Chapter 4, Section 4.5 pages 4.5-59 through 4.5-60) Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for responses to comments regarding construction-related effects in Calaveras Reservoir.

O-ACA&CBD2-19 The comment states that the Draft EIR does not explain how it reaches the conclusion that water quality impacts on fish from releases of contaminants in the soil including naturally occurring asbestos (NOA) would be less than significant.

As explained on pages 4.5-59 and 5.5-60 of the EIR, the significance determination for impacts on fish from the release of NOA and other contaminants in the soil is based on a study evaluating the effects of NOA exposure on fish resulting from a landslide into a waterway (Schreier et al. 1987). This study found no abnormalities in sampled fish. Based on this study, the EIR concludes that release of NOA would not have a substantial adverse effect on fish populations.

O-ACA&CBD2-20 The comment states that the EIR must define what constitutes sufficient flow in Alameda Creek to provide flow releases at the ACDD, and analyze impacts when sufficient flows in Alameda Creek are not present to provide fish releases.

As presented in EIR Vol. 1, Chapter 3, Section 3.6.5 and Chapter 4, Section 4.5, Impacts 4.5.5 and 4.5.6, natural streamflow in Alameda Creek upstream of the ACDD may not be sufficient to meet the flow or temperature criteria specified under the originally proposed flow schedules during dry periods. At such times, water would be released from Calaveras Reservoir through the proposed low flow valve to supplement or substitute for bypasses at the ACDD to ensure that the flow schedule criteria are satisfied. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding flow bypasses at the ACDD and flow releases at Calaveras Reservoir and effects on fish and fish habitat.

As indicated in previous responses, the CDRP Variant includes a revised flow schedule and other fishery enhancements. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The master response sections referenced above address both the Draft EIR project and the CDRP Variant.

O-ACA&CBD2-21 The comment contends that the Draft EIR does not analyze construction impacts on fish in the extended study area, does not provide support for the statement that construction impacts would be localized and not cause potentially significant effects in the extended study area, and does not evaluate the impacts of the full multi-year construction period. The comment also asserts that the extended study area is treated as occurring only at a point 9.3 miles downstream from the construction area.

Please see Responses O-ACA&CBD1-14 and O-ACA&CBD2-17 regarding the assessment of impacts over the multi-year construction period. Please see Response A-ACPWA-24 regarding the limited effects of the project on aquatic conditions in lower reaches of Alameda Creek. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for responses to comments regarding temporary construction-related effects on aquatic habitats and implementation of proposed construction Best Management Practices (BMPs) and Storm Water Pollution Prevention Plan (SWPPP) measures and to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the basis for the delineation of the primary and extended study areas. Please refer to the master response presented in Section 10.3, Hydrology, and specifically to 10.3.3, Diversions and Streamflow, and the section "Flow in Alameda Creek Downstream of Arroyo de la Laguna," for information on the EIR analysis of aquatic impacts downstream to San Francisco Bay. As described in the EIR (page 4.5-2 (Vol. 1, Chapter 4, Section 4.5), the extended study area includes the segment of Alameda Creek main stem from the Arroyo de la Laguna confluence downstream to San Francisco Bay.

O-ACA&CBD2-22 The comment questions the meaning of "greater" and "increased'" when applied to flow, and also finds the text unclear as to whether these terms apply to volume of flows or frequency of flows.

The terms "increased flow" and "greater flow" mean an increase in discharge or rate of flow. For example, the average rate of flow in Alameda Creek below the ACDD in February of a dry year under the existing condition would be 1 cubic feet per second (cfs). Implementation of the proposed project would increase monthly average flow to 6 cfs (Table 4.6.18, EIR page 4.6-81, Vol. 1, Chapter 4, Section 4.6).

The comment quotes several phrases from the EIR in a footnote. In these phrases, "increase" is used as described above. The phrases are correct and are not contradictory. Within the portion of the EIR where the quotes are taken, different terminology is used to indicate the frequency of diversions or releases, such as "more frequent diversions" and "the schedule for making diversions has been variable but generally less frequent compared to pre-DSOD restricted conditions." Understanding that characterizing changes in water flows can be a complex topic, the discussions in the EIR do adequately distinguish between flow rate (or volume) and flow frequency. When flow rates/volumes are expressed numerically, they are expressed as cfs or acre feet per year (AFY) (e.g., EIR pages 4.5-63 and 64, Tables 4.6.3, 4.6.4, and 4.6.17). Unless text describing changes in flows specifically has an indicator of time or frequency of occurrence (e.g., frequent, frequency, fewer), references to changes in flows relate to volume. For example, in the examples provided by the commenter, terms such as variable flow, greater flow, and decreased flow, would all relate to the volume of flow. An exception would be where a general expression of flows encompasses both volume and frequency, as in the first sentence of the last paragraph on EIR page 4.5-64; "Although the proposed bypass flows are expected to be adequate to sustain the resident trout population downstream of the ACDD…". In this instance, because flows needed to sustain trout populations have both a volume component and a frequency/temporal component, it is understood that this reference to flows addresses both volume and frequency. Where timing or frequency of flows is described, text specifically indicating timing or frequency, or the character of timing or frequency, is provided. For example, the fifth sentence of the last paragraph on page 4.5-73 states "This flow release schedule would provide reliable and stable flow bypasses at the ACDD when flows are naturally present…".

O-ACA&CBD2-23 The comment states that the Draft EIR does not provide support for its conclusions regarding the significance of the project's potential impacts on water quality.

This comment notes a summary statement made in Section 4.5, Fisheries and Aquatic Habitat, on EIR page 4.5-64 (Vol. 1, Chapter 4, Section 4.5) regarding water quality impacts of the proposed project. The beginning of the paragraph where this statement is made references Section 4.7, Water Quality as the source of the analysis summarized on page 4.5-64. A full discussion of the impacts on water quality as a result of project operation can be found in the EIR in the Impact 4.7.5 and 4.7.6 discussions on pages 4.7-60 to 4.7-72 (Vol. 2, Chapter 4, Section 4.7).

O-ACA&CBD2-24 The comment questions the baseline used in the analysis of project effects on the geomorphology of Alameda Creek between the ACDD and the Calaveras Creek confluence. Please refer to the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, and specifically to Section 10.2.2, Use of Appropriate Baselines, and to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and California Department of Fish and Game (CDFG), and Unimpaired Flows. Also refer to the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.4, Geomorphology, Sediment Transport, and Channel Formation.

The comment also questions how the conclusion that the proposed project would have a less-than-significant impact on stream geomorphology in the reach of Alameda Creek below the ACDD was determined. The master response presented in Section 10.3, and specifically Section 10.3.4, Geomorphology, Sediment Transport, and Channel Formation, provides additional information on the rationale behind the conclusion.

The comment states that the Draft EIR fails to analyze the impact on fish resulting from the change in channel-forming flows. The analysis in Impact 4.5.5 on EIR pages 4.5-60 – 4.5-70 (Vol. 1, Chapter 4, Section 4.5) considers both the effects of flow changes and the geomorphic changes produced by flow changes on fish and fish habitat.

O-ACA&CBD2-25 The comment states that the Draft EIR omits an analysis of the effects on fish of sediment diversion to Calaveras Reservoir through the diversion tunnel, including, but not limited to, native rainbow trout in Calaveras Reservoir.

Additional diversions of sediment to Calaveras Reservoir from increased diversions at the ACDD after the CDRP would have little effect on fish in the reservoir, as any increases would be minimal relative to the overall sediment load entering the reservoir from the Calaveras watershed (including Arroyo Hondo). In addition, there is no evidence that current sediment levels in the reservoir are having a significant adverse effect on the fishery, or that a minimal increase would result in a significant impact.

Note that the CDRP Variant includes installation of a fish screen at the upstream end of the Alameda Creek diversion tunnel. The presence of the fish screen would reduce the potential for sediment to enter the diversion tunnel and be transported to Calaveras Reservoir. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. Also see Response A-ACPWA-67.

O-ACA&CBD2-26 The comment states that the Draft EIR fails to analyze the impacts on native fish in the reservoir during the two shutdowns planned to occur during construction, and is particularly concerned with the potential for fish stranding and adverse effects on rainbow trout juveniles during the rearing period.

It is assumed that the two shutdowns referenced in the comment are the shutdowns of the outlet works described on EIR page 3-62 (Vol. 1, Chapter 3, Section 3.5). The only potential for fish stranding and other adverse effects from the shutdown would be in the reach of Calaveras Creek from the dam to the confluence with Alameda Creek. The reservoir would retain water during the shutdowns (see Response O-ACA&CBD2-14) and releases would continue from the ACDD into Alameda Creek; therefore, shutdowns of the outlet works would not affect these water bodies. Impacts on Calaveras Creek downstream of the reservoir from outlet work shutdowns are described as part of Impact 4.5.6 on EIR page 4.5-72 (Vol. 1, Chapter 4, Section 4.5). As described in the impact discussion, seepage from under the dam would continue to provide flows into Calaveras Creek below the dam during the outlet work shutdowns and provide hydrologic conditions that would support the fish community. Sufficient water would be available from seepage under the dam during the outlet works shut downs that fish stranding and significant adverse effects on rainbow trout juveniles during the rearing period would not occur.

O-ACA&CBD2-27 The comment states that the Draft EIR fails to analyze the impacts on native fish and the geomorphic process below Calaveras Dam when the flow release schedule is changed during the two shutdowns planned to occur during construction and during times of diminished water quality. The comment also states that the conclusion that seepage would provide hydrologic conditions that sustain the fish community during periods when there would be no releases lacks sufficient explanation, and there is no analysis of impacts on the extended study area from shutdown periods.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, regarding base flows during the shut down periods. Also see Response O-ACA&CBD2-26, above, regarding the analysis of impacts from outlet works shutdowns. Please refer to the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.3, Diversions and Streamflow, under the subsection entitled "Flow in Alameda Creek Downstream of Arroyo de la Laguna" for information on the EIR analysis of aquatic impacts downstream to San Francisco Bay. Please see Response A-ACPWA-24 regarding the limited effects of the project on aquatic conditions in lower reaches of Alameda Creek.

O-ACA&CBD2-28 The comment references a quote from page 4.5-75 of the Draft EIR ("events would occur at a similar or slightly increased frequency, duration, and magnitude"), and states that the Draft EIR does not disclose the frequency, duration, and magnitude of cone value testing events in the operation period, impairing the analysis of fish impacts.

The quote provided in the comment relates to spill events through the reservoir spillway and not cone valve releases. The full sentence containing the quoted text and the preceding sentence state:

> Additionally, once the reservoir has been filled, it is assumed that periodic spill events would resume. Whereas under existing conditions no spill events have occurred, under future operations such events would occur at a similar or slightly increased frequency, duration, and magnitude

> compared to those that occurred during pre-DSOD restrictions.

Dates and durations of spillway releases prior to DSOD restrictions are provided in Table 4.6-11 on EIR page 4.6-32 (Vol. 1, Chapter 4, Section 4.6). Although quantitative data on potential slight increases in spillway release frequency, duration, and magnitude relative to these past conditions cannot be accurately calculated and are not provided in the EIR, the key element in assessing fishery impacts is overall releases from Calaveras Reservoir. Table 4.6.16 on EIR page 4.6-72 (Vol. 1, Chapter 4, Section 4.6) provides modeled average monthly releases from Calaveras Reservoir to Calaveras Creek, and Table 4.6.17 provides estimated average annual flows in Calaveras Creek downstream of Calaveras Dam after project implementation. The EIR includes sufficient data to assess fishery impacts from project-generated changes in flows passing Calaveras Dam.

O-ACA&CBD2-29 The comment states that the EIR has a duty to include any information regarding future ACWD diversions that is reasonably available and to provide reasonable estimates if possible.

Diversions by ACWD are not discussed in detail in the EIR because the diversions occur more than 12 miles downstream of the CDRP and downstream of Niles Canyon. The diversions do not affect flow in Calaveras Creek or in Alameda Creek between the ACDD and Niles Canyon.

Another ACWD activity that affects flow in Alameda Creek downstream of the Arroyo de la Laguna is the release and recovery of State Water Project water. ACWD's State Water Project water from the Sacramento-San Joaquin Delta is stored in Del Valle Reservoir and released to the Arroyo de la Laguna. ACWD recovers the water at its diversion and infiltration facilities in the Alameda Creek Flood Control Channel downstream of Niles Canyon. These releases are incorporated into the Lower Alameda Creek model used in the analysis in the EIR. The model is based on gage data from the Arroyo de la Laguna that includes both natural flow and State Water Project releases. The Lower Alameda Creek model is described in the EIR on page 4.6-95 (Vol. 1, Chapter 4, Section 4.6) and in Volume 3, Appendix D.3. Thus, the EIR takes account of ACWD activities where they are relevant to the environmental analysis of the CDRP.

In addition, future ACWD projects were considered in the EIR in the cumulative impacts analysis for the CDRP (pages 6-7 through 6-52).

Please also refer to the master response presented in Section 10.3, Hydrology, Section 10.3.3 Diversions and Streamflows, and specifically the section "Flow in Alameda Creek Downstream of the Arroyo de la Laguna" for additional information on ACWD and the effects of its diversions on Alameda Creek, including further description of the combined effects of the CDRP and ACWD's diversions on flow in the reaches of Alameda Creek close to San Francisco Bay. Additional information on ACWD activities is also provided in Section 10.3.5, Water Supply Impacts.

The statement in the last sentence of the fourth paragraph on page 4.5-79 of the EIR that is referred to in the comment is inaccurate and is deleted. Deleted text is shown in strikethrough:

> ~~However, diversions by ACWD (specifics regarding the frequency, magnitude, and duration of future diversions are unknown) would further affect flows in the portion of Alameda Creek within the extended study area (i.e. at the mouth of Niles Canyon and lower Alameda Creek).~~

O-ACA&CBD2-30 The comment states that the Draft EIR fails to disclose if impacts relating to the water quality conditions in the reservoir created by the low water levels during construction will be adverse or significant, or which fish species will be affected.

The portion of the EIR referenced by the comment (page 4.5-76, Vol. 1, Chapter 4, Section 4.5) is an introduction to an analysis of reservoir operations impacts on resident fish. Construction impacts on water quality are mentioned briefly to provide background to the operational impacts analysis. The effects of construction on fish in Calaveras Reservoir are described as part of Impact 4.5.4 on EIR pages 4.5-57 – 4.5-60 (Vol. 1, Chapter 4, Section 4.5). Fish species found in Calaveras Reservoir are described on EIR page 4.5-35. Minimum water levels in Calaveras Reservoir during project construction would be consistent with those called for in the 1997 MOU with the CDFG (see Response O-ACA&CBD2-14). Therefore, although water quality conditions associated with these water levels may not be "ideal" for resident fish, they would not result in significant adverse effects. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for responses to comments regarding temporary construction-related effects on aquatic habitats within Calaveras Reservoir.

O-ACA&CBD2-31 The comment states that the analysis in the Draft EIR of the project's effects on fish passage between Calaveras Reservoir and Arroyo Hondo upstream of the reservoir during construction does not consider the two 7-month shutdown periods.

The comment is correct; the referenced text on EIR page 4.5-77 (Vol. 1, Chapter 4, Section 4.5) does not address the two outlet works shutdowns and related preparatory drawdowns of the reservoir to the 690-foot elevation. The last paragraph on page 4.5-76 has been modified to read (deleted text is shown as ~~strike-through~~ and new text is underlined):

> Construction of the replacement dam would take approximately 4 years to complete. During ~~this period~~ project construction, no change from the existing condition would occur other than the known reservoir drawdown to the 690-foot elevation prior to the planned outlet works shutdowns. However, drawdown to this level is common under existing conditions with DSOD restrictions in place, and the planned drawdown would not differ significantly from existing operations (i.e., project related reservoir surface elevations would not change the extent to which the drawdown condition creates fish passage limitations), and thus construction of the proposed project would have little to no impact on hydrologic connectivity and fish passage between the reservoir and Arroyo Hondo. ~~Calaveras Reservoir level would be managed similar to existing conditions as required by the 1991 CDFG MOU (690 feet minimum elevation) (SFPUC 1991) and DSOD restrictions (705 feet maximum elevation).~~ The water quality conditions in the reservoir created by the low water levels are not ideal for some fish species, and it is necessary to operate a hypolimnetic oxygenation system (HOS) to improve them. Once construction of the dam is complete, the reservoir would be filled and operated in a manner that is similar to pre-DSOD restrictions, with a maximum water elevation of approximately 756 feet elevation (i.e., spillway elevation). The HOS system would continue to be operated during the construction period, during filling of the reservoir, and after the reservoir has been filled to maintain DO concentrations similar to those under existing conditions. Once the reservoir is filled, the increased volume of water would result in a greater cold-water pool volume than under current DSOD-restricted conditions.

O-ACA&CBD2-32 The comment states that the Draft EIR acknowledges that ACWD diversions would affect Alameda Creek flows in the extended study area, but does not disclose what these effects might be or how habitat might be affected by flow changes.

Please see Response O-ACA&CBD2-29 regarding information on ACWD diversions and other activities and how they are addressed in the EIR.

O-ACA&CBD2-33 The comment summarizes the discussion in Impact 4.5.9 on Draft EIR pages 4.5-80 and 4.5-81, and concludes that the Draft EIR does not discuss whether the proposed project conflicts with the *Santa Clara County General Plan*, and does not analyze potential conflicts with the proposed Alameda Watershed Habitat Conservation Plan (HCP). The comment also states that the EIR approach to determining impacts and formulating mitigation measures for these topics is incorrect.

The first full paragraph on EIR page 4.5-81 (Vol. 1, Chapter 4, Section 4.5) discusses Policy R-RC 19 of the *Santa Clara County General Plan,* which encourages biological diversity through the protection of areas of functioning, intact natural ecosystems as well as areas known to support special-status species (in this case, resident rainbow trout).

The impact discussion on EIR page 4.5-81 identifies and analyzes potential impacts on "functioning, intact natural ecosystems as well as areas known to support special status species," and makes a determination that construction of the Draft EIR project and the extraction and disposal of dam building materials within the SFPUC-managed portion of the watershed would not result in a conflict with provisions of the *Santa Clara County General Plan* intended to protect biological diversity, based on the significance criterion listed on EIR page 4.5-52 (refer to last bullet) and the following finding:

- Construction related impacts would be less-than-significant, or less-than-significant after mitigation, per discussions of Impacts 4.5.1 through 4.5.4 on EIR pages 4.5-55 – 4.5-60; and;

Operation of the proposed replacement dam under the Draft EIR project, including implementation of the proposed flow release schedules, would improve habitat for resident rainbow trout and other aquatic species or have a neutral/less-than-significant effect, or have a less-than-significant effect after mitigation per discussions of Impacts 4.5.5 through 4.5.8 on EIR pages 4.5-60 – 4.5-80. Thus, as required by CEQA, the EIR adequately identifies potential impacts on fisheries and aquatic habitat, determines if those impacts would be significant and why, and then identifies mitigation measures to avoid or minimize potentially significant impacts. The conclusion stated on EIR page 4.5-82 that the proposed project would not conflict with the policies of the *Santa Clara County General Plan* is based on the preceding discussion of impacts, significance determinations and mitigation measures on EIR page 4.5-81. Because the project would have less-than-significant impacts, or impacts that could be mitigated to less than significant, the proposed project would not substantially impact fisheries and aquatic habitat and, therefore, would not conflict with policies in the *Santa Clara County General Plan* intended to protect natural resources, including Policy R-RD-19 related to protection of functioning, intact natural ecosystems.

The proposed Alameda Watershed HCP is discussed on EIR page 4.5-9 (Vol. 1, Chapter 4, Section 4.5). As stated in the last paragraph on EIR page 4.5-9, the HCP is currently being developed and will require preparation of a joint environmental impact report/environmental impact statement before the SFPUC, USFWS, and NMFS can consider adoption and implementation of the HCP. The SFPUC is working with the USFWS and NMFS to develop an HCP for the incidental take of listed species that may result from SFPUC operations and maintenance in the watershed, but none has been adopted. Therefore, the analysis of potential conflicts with the proposed HCP cannot be determined or analyzed in the CDRP EIR.

Note that the same impact and plan consistency conclusions described above for the Draft EIR project also apply to the CDRP Variant, but with additional benefits associated with the Variant flow schedule, construction of a fish ladder at the ACDD, and installation of fish screens. See Chapter 9, Section 9.3 of this Comments and Responses Document for an analysis of the environmental effects of the CDRP Variant.

O-ACA&CBD2-34 The comment summarizes environmental concerns associated with construction dewatering (i.e., removal of groundwater encountered during excavations) and discharge of that water, and contends that the Draft EIR does not adequately analyze the environmental effects of dewatering and discharge.

EIR page 4.7-37 (Vol. 2, Chapter 4, Section 4.7) describes that water obtained during dewatering could contain sediments and contaminants that could degrade water quality if the water were discharged directly to surface water or infiltrated to groundwater. However, discharges would need to meet Basin Plan standards set forth by the RWQCB (i.e., comply with an existing regulatory standard) before the water could be discharged to the creek through use of a portable treatment unit, as needed, to comply with discharge requirements.

Page 4.7-31 of the EIR (Vol. 2, Chapter 4, Section 4.7) presents a description of the mitigation that would reduce impacts on water quality related to dewatering to a less-than-significant level. As described in Mitigation Measure 5.7.1, a Stormwater Pollution Prevention Plan would be required for the project which would include a dewatering plan designed to address potential water quality impacts from construction site dewatering. Mitigation Measure 5.7.1 specifies that water produced from dewatering would be impounded and treated to comply with Basin Plan standards prior to discharge to receiving waters. Implementation of the dewatering plan, impoundment and treatment of water produced by construction site dewatering, and offset projects (if necessary) as required by Mitigation Measure 5.7.1 would ensure that the impacts of construction-related dewatering discharges on water quality would be less than significant.

The EIR does not defer analysis of impacts from dewatering, but discloses the impacts as described above and assesses the impacts relative to significance criteria listed on page 4.7-22.

O-ACA&CBD2-35 The comment states that the Draft EIR fails to analyze the indirect impacts of importing sand and gravel for construction from off-site areas, which would start in winter 2012 and would last approximately 18 months.

The commenter has expressed an opinion but has presented no evidence or analysis in this comment to refute the substantial evidence presented and relied upon in the EIR. The environmental effects of importing sand and gravel are addressed in applicable sections of the EIR:

- Traffic impacts in Section 4.12, EIR pages 4.12-7 – 4.12-17 (Vol. 2, Chapter 4)
- Air Quality impacts in Section 4.13, EIR pages 4.13-33 – 4.13-44 (Vol. 2, Chapter 4)
- Noise impacts generated by truck traffic in Section 4.14, EIR pages 4.14-21 – 4.14-24 (Vol. 2, Chapter 4)

- Impacts on provision of emergency services caused by road closures and truck traffic in Section 4.15, EIR pages 4.15-17 and 4.15-18 (Vol. 2, Chapter 4)
- Impacts on mineral and energy resources in Section 4.16, EIR pages 4.16-3 and 4.16-4 (Vol. 2, Chapter 4)

Given the completeness of the analysis of effects of importing sand and gravel provided in the EIR, and the lack of detail provided in the comment, it is unclear what indirect effects the commenter believes are not addressed in the EIR.

O-ACA&CBD2-36 The comment asserts that the Draft EIR fails to analyze project impacts resulting from algae blooms and reduced dissolved oxygen (DO). Low DO levels can be deleterious to fish and can be exacerbated by algae blooms. Sediment released during construction could add nutrients to the reservoir that could increase algae growth. Under proper conditions, algae can create microcystin toxins from toxic cyanobateria (blue-green algae) Microcystis aeruginosa. Such toxins can threaten human and animal health.

The EIR acknowledges (on pages 4.7-5 and 4.7-6, Vol. 2, Chapter 4, Section 4.7) that under DSOD restrictions, anoxic (low dissolved oxygen) conditions are likely to recur annually due to the reduced volume of oxygenated water available at the onset of reservoir stratification, and that anoxic conditions favor the growth of undesirable algae. Algal monitoring is currently typically performed at Calaveras Reservoir twice monthly. During the late summer and fall when Calaveras Reservoir stratifies, hypolimnetic aeration is carried out to enhance water quality by reducing the concentrations of dissolved iron, manganese, and hydrogen sulfide in the raw water.

The SFPUC began operation of its hypolimnetic oxygenation system (HOS) in September 2005, which can deliver a daily maximum of 6,290 pounds of oxygen during peak periods in the summer and fall. After the oxygenation system was put into operation, dissolved oxygen concentrations increased. The SFPUC expects to operate the HOS annually to prevent anoxic conditions from forming in spring. As noted on EIR page 4.7-28 (Vol. 2, Chapter 4, Section 4.7), the HOS would continue to be operated during project construction, and the use of the HOS may need to be increased at that time to reduce potential impacts from increased turbidity and nutrients with respect to dissolved oxygen levels and algal growth. As specified by Mitigation Measure 5.7.1, BMPs would also be implemented during construction to minimize erosion and sediment transport from the construction activities from entering waterways.

With the combined continued operation of the HOS, continued algae monitoring, and implementation of mitigation measures included in the EIR, Calaveras Reservoir would maintain acceptable DO levels and not experience hazardous algae growth throughout the construction period and future operation. Calaveras Reservoir is a water supply facility designed and operated to provide high-quality water to SFPUC customers. The presence of the HOS and ongoing algae monitoring, as well as other water quality maintenance and monitoring efforts voluntarily implemented by the SFPUC along with those required by law, are evidence of this primary water supply purpose. The suite of activities currently implemented to maintain acceptable water quality conditions, even during the period of DSOD restrictions and reduced reservoir levels, would continue during construction and after completion of the CDRP. The maintenance of water quality has also supported established fish populations in the reservoir, and is anticipated to continue to do so.

O-ACA&CBD2-37 The comment states that the Draft EIR analysis of cumulative fish impacts examines water quality, but not water volume nor fish passage.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the analysis of the potential cumulative impacts of the CDRP on fisheries and aquatic habitat in the EIR. The EIR analysis evaluates how the Draft EIR project, with implementation of the originally proposed flow release schedules, would affect both water quality and streamflow (volume) conditions for steelhead spawning, egg incubation, rearing, and migration. Refer also to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant for a discussion of the basis for development of the flow schedules.

Section 9.5 in this Comments and Responses document presents a discussion of the cumulative impacts associated with implementation of the CDRP Variant. The master response sections referenced above address both the Draft EIR project and the CDRP Variant.

O-ACA&CBD2-38 The comment contends that the Draft EIR does not address Calaveras Dam's noncompliance with the 1997 MOU, which has resulted in the failure to release 6,300 acre-feet of water per year for the past 12 years (since 1997).

As described in the EIR (Vol. 1, Chapter 3, EIR page 3-20), under the terms of the 1997 MOU the SFPUC committed to release up to 6,300 AFY to enhance fisheries and other natural resources in conjunction with the construction of a downstream water recapture facility. However, due to the subsequent DSOD restrictions on the operations of the reservoir (which restrict the pool elevation in the reservoir), the SFPUC has not implemented flow releases in accordance with the MOU. The DSOD will not lift restrictions on the reservoir pool elevation until the dam is replaced.

The CDRP Variant includes a proposed instream flow schedule that replaces the flow schedule in the 1997 MOU. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-ACA&CBD2-39 The commenter states that two projects, the Del Valle Reservoir and water deliveries to ACWD from the South Bay Aqueduct via Vallecitos Creek, must be included in the cumulative impact analysis as present projects.

Section 6.2.2, pages 6-9 and 6-10 of the EIR, explains how the list of relevant projects considered in the cumulative impact analysis was identified. These projects are listed in Table 6.1 on pages 6-11 – 6-17 and are shown in Figure 6.1 on page 6-18. As stated on page 6-10, “the list presented in Table 6.1 includes projects under development and planned in the future and does not specifically identify SFPUC or other projects that have been completed (e.g., existing Irvington Tunnel, existing Alameda Siphons, and the existing water treatment facilities). However, the existing environmental conditions reflect the cumulative effects of these past projects, and these conditions form the basis for assessing the effects of probable future projects and cumulative impacts.” Since the Del Valle Reservoir and water deliveries to the ACWD from the South Bay Aqueduct via Vallecitos Creek are completed projects, they are not identified in the list of cumulative projects presented in Table 6.1. However, these facilities, as well as other existing facilities, are considered in the cumulative analysis as contributors to existing and future conditions.

O-ACA&CBD2-40 The comment states that the EIR must analyze all reasonably foreseeable projects as part of its cumulative impact analysis, including the proposed recapture facility.

Vol. 2, Chapter 6 and Vol. 3, Appendix J of the EIR provide a complete and thorough analysis of cumulative impacts that could result from past, present and reasonably foreseeable future projects in relation to the Draft EIR project. The Upper Alameda Creek Filter Gallery project (the proposed recapture facility) is specifically addressed in the cumulative impact analysis related to a future steelhead population in Alameda Creek (see Vol. 2, Chapter 6, EIR page 6-24 and Vol. 3, Appendix J). Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for additional information regarding the Upper Alameda Creek Filter Gallery Project as a cumulative project. Regarding changes to the assessment of cumulative impacts associated with the CDRP Variant, refer to Section 9.5.2, Cumulative Effects of the Variant, presented in Chapter 9 of this Comments and Responses document.

O-ACA&CBD2-41 The comment states that the EIR cumulative analysis must include as a related action the SFPUC's consideration in 2018 of potential water supply strategies for the 2018 through 2030 timeframe and must also include increases in deliveries from SFPUC watersheds in the event that conservation, recycled water and groundwater projects are not completed prior to an increase in customers' demand.

The commenter is correct in noting that the SFPUC's consideration of potential water supply strategies for the 2018 through 2030 timeframe is a reasonably foreseeable future project. However, this project is not included in Table 6.1: Cumulative Projects Related to the CDRP in the Sunol Valley Region (EIR pages 6-11 to 6-17) because at this time, there is no available information on the project description, and therefore no indication of potential cumulative impact topics or estimated construction schedule (if applicable). Therefore, potential future water supply strategies are not considered in the cumulative impact analysis in the CDRP EIR.

The only available information on this project is described in the WSIP PEIR (PEIR Vol. 7a, Chapter 13, Section 13.4) under the description of the Phased WSIP Variant as follows:

"By 2018, the SFPUC would reevaluate the wholesale customer delivery amount and consider whether to maintain these delivery limitations from the SFPUC watersheds through 2030 or increase them, and whether and how to provide additional supply to the wholesale customers. In the years approaching 2018, the SFPUC would update demand projections for its wholesale and retail customers and reevaluate customer water delivery needs and water supply options. As part of the process, the City and County of San Francisco (CCSF) would conduct additional environmental studies and CEQA review as appropriate to address the SFPUC's recommendation regarding water supply and proposed water system deliveries after 2018."

The commenter provides no basis for the statement that the cumulative analysis must evaluate increased deliveries from SFPUC watersheds in the event that conservation, recycling groundwater projects are not implemented. There are numerous reasonably foreseeable conservation, recycling and groundwater projects in the retail and wholesale customer service areas. The SFPUC, as part of the WSIP, has committed to implementing such programs, as have the wholesale customers, and recent changes in state law (codified in Section 10608 and 10800 *et seq* of the California Water Code) require (among other things) that all urban water retailers in the state achieve a 20 percent reduction in per capita water use in 2020. No change to the cumulative analysis is warranted.

O-ACA&CBD2-42 The commenter suggests that the cumulative impact analysis must include the enlargement of the dam as a reasonably foreseeable project.

An enlargement of the reservoir is not considered a future phase or consequence of the proposed project, nor does inclusion of the robust dam design commit the SFPUC to expanding the Calaveras Reservoir; consequently, future expansion is not considered to be a reasonably foreseeable project and is not identified as a cumulative project within the analysis of the EIR. Please refer to Section 10.1, Master Response on Potential Future Enlargement of Calaveras Reservoir, and specifically to Section 10.1.2, Potential Future Enlargement of Calaveras Dam, for a detailed discussion of the issues raised by this comment.

ACA&CBD2-43 The comment contends that the Draft EIR fails to analyze the feasibility of Mitigation Measure 5.5.1 and impacts on native fish from the proposed mitigation's capture, transport, and relocation of fish. The comment also states that Mitigation Measure 5.5.1 does not include performance standards to evaluate success.

Regarding the feasibility of Mitigation Measure 5.5.1, capture and relocation of fish is a well-established process used in a variety of circumstances, including removal of fish from disturbance areas, capture and transport of native fish to new locations to assist with recovery efforts, and capture and transport of anadromous fish species past migration barriers.

Regarding the impacts of Mitigation Measure 5.5.1 and success criteria, given the established nature of fish capture and relocation protocols and that relocation activities would be undertaken by qualified biologists familiar with requirements of the targeted species, there is a reasonable expectation of success without causing undo harm to the fish that would be moved. Therefore, specific success criteria are not required for Mitigation Measure 5.5.1 to achieve its desired intent, which is to substantially minimize mortality to fish within the construction footprint.

O-ACA&CBD2-44 The comment states that the Draft EIR fails to define the standard that would trigger implementation of Mitigation Measure 5.5.5b, Resident Rainbow Trout Adaptive Management. The comment also states that Mitigation Measure 5.5.5b does not specify the quantities of water by which it will modify the flow release schedule or implement seasonal restrictions on diversions, which is a deferral of the analysis.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding Mitigation Measure 5.5.5b.

EIR Mitigation Measure 5.5.5b (Vol. 2, Chapter 5, Section 5.5, page 5-17) does not specify the quantities of water used to modify flow releases or changes in the timing of diversions, as it is impossible to know the details of these actions at this time because they would be informed by future monitoring. As indicated in the discussions of Mitigation Measures 5.5.5a and 5.5.5b (pages 5-16 and 5-17), adjustments to flow and diversions to benefit resident rainbow trout may not be needed at all. If adjustments are needed, monitoring results would indicate whether small adjustments or large adjustments would be appropriate. Identifying the level of flow releases and/or diversion modifications, in the absence of site-specific data, could unnecessarily result in too little or too great of an adjustment. The CEQA prohibition on deferral of analysis is not triggered, as the combination of Mitigation Measures 5.5.5a and 5.5.5b provide performance criteria for providing suitable habitat for resident rainbow trout spawning and egg incubation and sustaining a resident rainbow trout population.

The nature of adaptive management is to monitor, adjust as needed based on monitoring results, and to continue monitoring to determine whether additional adjustments are needed. As long as an ultimate performance measure or success criterion guiding the adaptive management process is provided, as it is in this case, adaptive management is an appropriate mitigation approach under CEQA.

As noted in previous responses, the CDRP Variant includes revised flow schedules, fish screens at the diversion tunnel and in Calaveras Reservoir, a fish ladder at the ACDD, and a comprehensive AMIP, which were developed, in part, through coordination with NMFS and CDFG. Because of the beneficial effects associated with the revised flow schedules, the fish screen at the diversion tunnel, the reduced diversion capacity and period of diversion, and AMIP, there is no longer a need for Mitigation Measure 5.5.5a (requiring the SFPUC to develop and implement a monitoring program to ensure that the proposed flow releases are sufficient to sustain the resident trout population in Alameda Creek downstream of the ACDD) or Mitigation Measure 5.5.5b (requiring the SFPUC to implement adaptive management measures including additional flow releases, seasonal restrictions on operation of the ACDD, or installation of a fish screen at the diversion tunnel). The CDRP Variant, in effect, implements Mitigation Measures 5.5.5a and 5.5.5b as described in the EIR. As a result, these mitigation measures would not apply to the CDRP Variant. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-ACA&CBD2-45 The comment asserts that the Draft EIR does not explain how Mitigation Measure 5.7.1 will reduce construction turbidity impacts, mitigate fishery displacement and harassment impacts, or mitigate construction contaminant and NOA impacts on resident rainbow trout and the overall fish community to a less-than-significant level.

Mitigation Measure 5.7.1 is provided on EIR pages 5-18 – 5-26 (Vol. 2, Chapter 5, Section 5.7) and consists of an extensive list of specific actions to protect water quality by reducing sediment inputs and the potential for contaminant releases during project construction.

Mitigation Measure 5.7.1 would reduce construction turbidity impacts to a less-than-significant level through the implementation of a SWPPP and associated BMPs. Implementation of the SWPPP and BMPs would minimize erosion and sediment transport, require collection and treatment of runoff water and water produced during dewatering within the project site, require inspection and maintenance of BMPs, and require monitoring of turbidity to assess the effectiveness of BMPs. If monitoring indicates elevated levels of turbidity, treatment would be imposed to ensure levels are within established water quality standards. In addition, the SFPUC would notify the RWQCB, ACWD, Alameda County Department of Environmental Health, and East Bay Regional Park District in the event of elevated turbidity in any waterways in the Alameda Creek system potentially affected by the project. In addition, the Alameda County Flood Control and Water Conservation District has been added to the notification list in response to Comment A-ACPWA-79. Through these actions, Mitigation Measure 5.7.1 would mitigate construction turbidity impacts to below applicable significance thresholds.

The ability of Mitigation Measure 5.7.1 to mitigate fish displacement and harassment impacts is based on the discussion of Haul Route Option 2 impacts (i.e., use of barges) provided on EIR pages 4.5-58 and 4.5-59 (Vol. 1, Chapter 4, Section 4.5). Construction of in-water facilities and operation of these facilities as well as barges could result in water quality impacts that could harass and displace resident fish. Various requirements in Mitigation Measure 5.7.1 reduce the potential for water quality impacts that could harass or displace fish, such as using suction dredging, if feasible, to construct barge access channels and installing a turbidity barrier around the work area during lane dredging and installation of jetties, docks, and anchors. As stated on EIR page 4.5-59, fish displacement and harassment caused by use of Haul Route Option 2 is considered a less-than-significant impact, as there is ample habitat available in Calaveras Reservoir to allow fish avoidance of activity areas. Mitigation Measure 5.7.1 is simply identified as an action that would further ensure the impact remains less than significant.

Regarding construction contaminants and NOA, Mitigation Measures 5.7.1 would reduce the potential impacts on water quality due to the release of hazardous materials, construction debris, trash, NOA, and metals during construction to less-than-significant levels through the implementation of a SWPPP and associated BMPs. Numerous SWPPP and BMP requirements reduce or eliminate the potential for releases of hazardous materials, such as inspecting on-site vehicles and equipment daily for leaks and repairing any leaks immediately and keeping hazardous materials and other wastes at least 100 feet from wetlands and other aquatic habitats.

Mitigation Measure 5.7.1 includes requirements to treat all elevated levels of asbestos and metals on site to bring them within the established water quality standards in force at the time of occurrence. Excess water generated in NOA-containing areas would be treated as necessary prior to discharge to a receiving water body, which may include advanced treatment such as coagulation/flocculation (if necessary), sedimentation, and filtration. Because on-site soils are the source for NOA, all SWPPP and BMP requirements that prevent sediment from entering aquatic habitats would also prevent potential NOA entry. In addition, exposure to NOA and metals in the creeks and Calaveras Reservoir would be short term, as concentrations would attenuate over time.

As stated on EIR pages 4.5-59 and 4.5-60, impacts from NOA and releases of existing hazardous materials in Calaveras Reservoir are considered less than significant. However, Mitigation Measure 5.7.1, identified to address significant water quality impacts from other mechanisms (e.g., sedimentation, turbidity), would further reduce the less than significant impact on fish from NOA and releases of existing hazardous materials.

O-ACA&CBD2-46 The comment asserts that the Draft EIR fails to analyze the water quality impacts of applying water to roads for dust control.

EIR page 4.7-47 (Vol. 2, Chapter 4, Section 4.7) describes that potential water quality impacts from project construction would be mitigated through the implementation of a SWPPP and associated BMPs. In accordance with Mitigation Measure 5.7.1, the SWPPP would incorporate a dust mitigation plan outlining detailed dust control measures for areas containing NOA and metals. The quantity of runoff water would be minimized in accordance with Mitigation Measure 5.7.1. Water application rates would be controlled to prevent runoff and ponding, and leaks from water trucks and equipment would be repaired immediately. Therefore, applying water to roads for dust control would not result in any runoff to aquatic habitats in the project area, and no water quality impacts would occur.

O-ACA&CBD2-47 The comment makes the general statement that the Draft EIR fails to properly mitigate construction-phase water quality impacts. No details or evidence supporting the statement are provided. See prior responses throughout this letter (e.g., O-ACA&CBD2-19, O-ACA&CBD2-26, and O-ACA&CBD2-30) relative to the protection of water quality during project construction.

O-ACA&CBD2-48 The comment makes the general statement that the Draft EIR fails to properly mitigate construction-phase hydrology impacts. No details or evidence supporting the statement are provided. All construction-phase impacts on hydrology were determined to be less than significant. No mitigations measures are necessary.

O-ACA&CBD2-49 The comment makes the general statement that the Draft EIR fails to properly mitigate for construction-phase impacts on fish. No details or evidence supporting the statement are provided. See prior responses throughout this letter (e.g., O-ACA&CBD2-17, O-ACA&CBD2-18, O-ACA&CBD2-21, and O-ACA&CBD2-26) relative to impacts and mitigation for fishery resources during project construction. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for responses to comments regarding construction-related impacts.

References

Alameda County Community Development Agency. 2009. Planning Department Staff Report to Planning Commission, PLN2009-00137, November 2, 2009.

Alameda County Planning Commission. 2010. Minutes of Meeting, Alameda County Planning Commission, General Plan Conformance Report, PLN2009-00137, January 19, 2010.

11.2.6 ACTERRA ET AL. (46 BAY AREA CONSERVATION ORGANIZATIONS), 12/14/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

Many of the issues raised in the comments below are addressed by project modifications included in the Variant, such as a fish screen at the upstream end of the diversion tunnel at the Alameda Creek Diversion Dam (ACDD) and a fish ladder at the ACDD. In addition, many of the topics raised in these comments are addressed in the following master responses included in this document:

- Section 10.2, Baselines Used in the Environmental Analysis
- Section 10.3, Hydrology
- Section 10.4, Fisheries

Cross-references to specific subsections within these master responses are provided in the responses that follow, as appropriate.

O-Acterra et al.-01 The comment, which expresses support for rebuilding Calaveras Dam as quickly as possible, is acknowledged.

O-Acterra et al.-02 The comment states that a major issue requiring resolution is how the SFPUC will operate the water system once the dam is rebuilt, and whether operations will allow for the restoration of steelhead trout and salmon below the dam.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a description of the flow release schedules proposed as part of the CDRP, information on the analyses that were conducted to assess the flow release schedules, and information on monitoring and adaptive management (i.e. the AMIP proposed by the SFPUC) for steelhead, Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, regarding flow-related effects; and Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, regarding project impacts on Chinook and coho salmon.

In addition, as indicated in the preface to these responses, since publication of the Draft EIR the SFPUC has developed the CDRP Variant, which includes enhancements for fishery resources. These include a fish ladder at the ACDD, a screen on the Alameda Creek Diversion Tunnel and revised flows schedules. The net effect of these various enhancements would reduce diversions from Alameda Creek while providing greater bypass flows at the ACDD and releases from Calaveras Dam relative to the Draft EIR project. Refer to Chapter 9, Section 9.2, for a description of the CDRP Variant and to Section 9.3 for the analysis of impacts of this project variant on fish species.

O-Acterra et al.-03 The commenter states the belief that numerous conservation, recycling, and groundwater projects can be implemented that will make up the water needed for healthy fisheries in the SFPUC's Alameda Creek, Tuolumne River, and Peninsula watersheds.

Demand reduction and water supply provided through conservation, recycling, groundwater projects and surface water supplies are all part of the SFPUC's water supply portfolio and management strategies to meet current and future demand. As described on EIR pages 1-3 – 1-5 (Vol. 1, Chapter 1, Section 1.2), the proposed project is one of the facility improvement projects under the SFPUC's Water System Improvement Program (WSIP), which the SFPUC adopted on October 30, 2008. The CDRP EIR tiers from the WSIP Program EIR (PEIR) and also incorporates by reference the relevant description and analyses presented in the PEIR as applicable to the CDRP. Under the adopted WSIP, the SFPUC has committed to the development of 10 million gallons per day (mgd) of a combination of conservation, recycled water, and local groundwater projects within the SFPUC's retail service area. The development of approximately 10 mgd of a combination of conservation, recycled water, and local groundwater projects would also need to be developed in the wholesale customer service area to meet demand.

O-Acterra et al.-04 The comment makes several points: (1) the SFPUC diverts 86 percent of the streamflow of upper Alameda Creek; (2) future SFPUC operations will affect water flow, habitat suitability, and fish passage far downstream; and (3) operation of Calaveras Dam should adhere to the SFPUC's watershed stewardship policy and to the California Fish and Game Code sections requiring the SFPUC to provide bypass flows to keep native fish downstream of its dams in good condition. The comment also states that the Federal Endangered Species Act (FESA) requires the SFPUC to provide sufficient water for federally protected steelhead trout.

Regarding the SFPUC's diversions from upper Alameda Creek, please refer to Section 10.3, specifically Section 10.3.3, Diversions and Streamflow. Regarding the SFPUC's future operations under the CDRP, refer to Section 10.4, specifically Sections 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for issues related to project effects on flows and associated aquatic habitat conditions, California Fish and Game Code, and FESA. Refer to Response A-CDFG-10 regarding consistency with the SFPUC's Water Enterprise Stewardship Policy. In addition, see Chapter 9 for description and analysis of the CDRP Variant.

O-Acterra et al.-05

The comment states that analyses, conclusions, and mitigation for project effects on steelhead and other listed species are inadequate, and that the Draft EIR downplays and misstates the impacts of SFPUC dam operations on water flow, habitat suitability, and fish passage farther downstream.

The commenter has presented no specific evidence or analysis to refute the EIR. The Major Environmental Analysis Division of the San Francisco Planning Department believes the analyses and conclusions presented in the Draft EIR to be accurate, objective, complete, and supported by substantial evidence in the record.

Vol. 1, Section 4.5 of EIR, pages 4.5-60 – 4.5-76 and 4.5-78 – 4.5-80 (see Impacts 4.5-5, 4.5-6, and 4.5-8); Vol. 2, Chapter 6; and Vol. 3, Appendix J, analyze the potential effects of project operation on fisheries and aquatic habitats downstream of the ACDD and Calaveras Dam. The conclusions of the impact analysis are based on the nature, magnitude, and frequency of predicted project effects relative to the existing conditions described in Section 4.5.1.1 (EIR pages 4.5-4 – 4.5-47) using the significance criteria described on EIR page 4.5-52. The approach to analysis on EIR pages 4.5-52 – 4.5-53 explains the methodology used to determine impact significance. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for information regarding issues related to potential effects of project operation on fisheries downstream of the ACDD and Calaveras Dam.

The impacts of the project on water flow are described in EIR Section 4.6, Hydrology, and operational impacts are described in Impacts 4.6.4 through 4.6.12 on EIR pages 4.6-64 – 4.6-106.

O-Acterra et al.-06 The comment states that the Draft EIR wrongly asserts that diverting all winter and spring flows from upper Alameda Creek at the ACDD under 650 cubic feet per second will benefit fish because it will provide "a more predictable and stable flow."

Analysis provided in Vol. 1, Section 4.5 of the EIR, pages 4.5-60 – 4.5-76 and 4.5-78 – 4.5-80 (see Impacts 4.5-5, 4.5-6, and 4.5-8); Vol. 2, Chapter 6; and Vol. 3, Appendix J indicates that the proposed flow bypasses at the ACDD provide a more predictable and stable flow downstream in Alameda Creek compared to existing conditions, where operations have resulted in periods when all flows are diverted and no bypasses occur. Also refer to Sections 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and 10.4.7, Future Cumulative Analysis of Effects on Steelhead in the master response presented in Section 10.4, for information regarding the potential effects of project operation on fisheries and aquatic habitats downstream of the ACDD and Calaveras Dam.

As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules and installation of a fish screen at the upstream end of the diversion tunnel at the ACDD, which would limit the period of diversion and reduce the maximum flow diversion capacity at that location from approximately 650 cfs to 370 cfs. Refer to Chapter 9 for more information.

O-Acterra et al.-07 The comment states that flows for steelhead will only be provided in the upper watershed if steelhead occur in the absence of such flows.

Please refer to Section 10.4, Fisheries, and specifically Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for information regarding the timing of implementation of the proposed flow schedules for steelhead.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules and other fishery enhancements. Refer to Chapter 9 for more information.

O-Acterra et al.-08 The comment states that the environmental baseline covers a period of years during which conditions for fish were poor and that occurred partially during a drought, leading the Draft EIR to conclude that modest improvements in flow conditions are adequate to determine impacts.

Please refer to “the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, and specifically to Section 10.2.2, Use of Appropriate Baselines, in the subsection entitled “Use of Baseline with Poor Conditions for Fisheries,” for a response to this comment.

O-Acterra et al.-09 The comment states that the Draft EIR does not analyze the impacts of Calaveras Dam and the ACDD with regard to blocking spawning and rearing habitat for steelhead or impairing flows in Alameda Creek.

Please refer to EIR Vol. 1, Section 4.5, page 4.5-56 (see Impact 4.5.3), which analyzes project effects with respect to creating barriers to fish movement/migration. Also refer to Section 10.4, Fisheries, and in particular Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, regarding this topic. Refer to the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, and specifically to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and California Department of Fish and Game (CDFG), and Unimpaired Flows, for discussion of the existing ACDD and Calaveras Reservoir relative to unimpaired (“pre-dam”) conditions.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, installation of fish screens at the Alameda Creek diversion tunnel and

Calaveras Reservoir, a fish ladder at the ACDD, and an Adaptive Management Implementation Plan (AMIP). Refer to Chapter 9 for more information.

O-Acterra et al.-10 The comment states that the Draft EIR does not fully assess downstream changes in channel morphology and habitat.

The EIR includes an assessment of CDRP effects on geomorphology and channel formation (pages 4.6-102 – 4.6-105). Some additional analysis of channel geomorphology has been added in response to this and other comments, although there is no change in the significance conclusions. For more information, please see Section 10.3.4, Geomorphology, Sediment Transport, and Channel Formation. Refer to Chapter 9, Section 9.3, for the analysis of the effects of the CDRP Variant, including proposed changes in sluicing practices at the ACDD, on channel morphology.

O-Acterra et al.-11 The comment states that the proposed flow releases are designed for resident rainbow trout, not migratory fish, and do not address the habitat needs of Chinook salmon.

Please refer to Section 10.4, Fisheries, and specifically Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a description of the flow release schedules (including flows for steelhead), information on the analyses that were conducted to assess the flow release schedules, and information on monitoring and adaptive management (i.e. the AMIP proposed by the SFPUC) for steelhead. Please refer to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for a discussion of Chinook salmon.

O-Acterra et al.-12 The commenter states that the proposed mitigations for construction impacts on endangered species are “meager and inappropriate.”

EIR Section 4.4.2.3 provides a detailed analysis of impacts on special-status wildlife species (including California red-legged frog, California tiger salamander, Alameda whipsnake, Callippe silverspot butterfly, bald eagle, foothill yellow-legged frog, Heermann’s kangaroo rat, western pond turtle, nesting raptors, bats, and migratory birds) as well as special-status plant species (most beautiful jewel-flower and Diablo helianthella). With the exception of Heermann’s kangaroo rat (which the analysis concluded does not occur in the project area), the EIR identifies measures to mitigate project construction impacts on all of these species to less-than-significant levels; refer to EIR pages 5-2 – 5-13 (Vol. 2, Chapter 5). The identified measures, which include avoidance and minimization strategies, and requirements for surveys, restoration, and compensation, conform with CEQA requirements and would be implemented in accordance with regulatory agency permits and approvals as required. The CDRP, with resource agency input, has been modified throughout the planning and design phases to avoid and minimize impacts to habitat. The SFPUC and the San Francisco Planning Department recognize that the U.S. Fish and Wildlife Service (USFWS) will consider impacts on habitat through the Section 7 consultation process; that the USFWS and National Marine Fisheries Service (NMFS) will consider recovery of listed species as part of future permits, authorizations, and approvals required under the federal Endangered Species Act (FESA); and that the California Department of Fish and Game (CDFG), as a trustee agency, will consider the take of, and require implementation of measures to mitigate impacts on, state-listed species under the California Endangered Species Act (refer to EIR Section 3.7.3, Agency Approvals, Vol. 1, Section 3.7, beginning on page 3-71).

O-Acterra et al.-13 The comment asserts that the Draft EIR lacks meaningful mitigation for greenhouse gas (GHG) emissions from the project.

The SF Planning Department disagrees with this assertion. Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section 10.5.2, Construction GHG Emissions Impacts and Mitigation, for responses to comments regarding the adequacy of construction-phase measures to mitigate GHG emissions.

O-Acterra et al.-14 The commenter proposes that the EIR and the project be changed to provide minimum flows downstream of SFPUC dams consistent with those proposed by the federal regulatory agency, the NMFS.

As described on Draft EIR pages 3-69 and 3-70 (Vol. 1, Chapter 3, Section 3.6.6), the project originally proposed to implement instream flow schedules to support steelhead spawning and rearing habitat when steelhead have regained access above the BART weir, and the NMFS has determined that steelhead have access to the upper Alameda Creek watershed; the flow schedules are subject to approval by the NMFS in accordance with FESA. Please refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding issues related to the FESA Section 7 consultation with the NMFS.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. These fishery enhancements were developed, in part, through close coordination and in agreement with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-Acterra et al.-15 The commenter proposes that the EIR and the project be changed such that winter and spring flows are adequate to provide for adult attraction and upstream passage and for smolt out-migration [presumably for steelhead], and that fall flows should address the habitat needs of Chinook salmon.

Refer to Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a description of the flow release schedules proposed as part of the CDRP and for information on the analyses that were conducted to assess the flow release schedules . Regarding Chinook salmon, refer to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek.

O-Acterra et al.-16 The commenter proposes that the EIR and the project be changed such that downstream flows in Alameda Creek mimic the natural hydrograph of the stream.

Table 4.6.3 and Figure 4.6.3a: Average Daily Flow in Arroyo Hondo Upstream of Calaveras Reservoir, Water Years 1998-2009 and Figure 4.6.3b: Average Daily Flow in Arroyo Hondo Upstream of Calaveras Reservoir, Winter Months of Water Year 2006 in the EIR (pages 4.6-13 – 4.6-15) show flow in Arroyo Hondo upstream of Calaveras Reservoir. The Arroyo Hondo watershed is largely unaffected by human activities. Prior to the construction of the SFPUC's water supply facilities, the flow regime in Alameda Creek below its confluence with Calaveras Creek was similar to the flow regime of Arroyo Hondo:

flashy flows in response to precipitation over the watershed, and the greatest and most sustained flows in January, February, and March. Table 4.6.20 in the EIR (page 4.6-91) shows flow in Alameda Creek downstream of its confluence with Calaveras Creek with the proposed project in place. Although flows would be reduced from the natural hydrograph that existed prior to the development of water supply facilities, they would still exhibit the same seasonal pattern as unimpaired flows; that is, the greatest flows would occur in January, February, and March. The Draft EIR project would include bypass flows at the ACDD or releases from Calaveras Dam based on the flow schedule for resident trout called for in the 1997 Memorandum or Understanding between the SFPUC and the California Department of Fish and Game (Figure 3.16: Proposed CDFG MOU Flow Releases, page 3-68). The greatest required flows in the schedule for resident trout occur during the months when natural flows would have been at their peak.

Once steelhead have regained access to the upper Alameda Creek watershed, the SFPUC would make additional releases to support them. The flow schedule for steelhead is shown in EIR Table 3.7 (page 3-70). The greatest required flows in the schedule for steelhead are also during the months when natural flows would have been at their peak. Thus, flows with the proposed project in place would mimic the natural flow pattern in Alameda Creek.

Also refer to Section 9.3.5 in Chapter 9, Project Variant, for information regarding operational effects on fisheries resources under the CDRP Variant.

O-Acterra et al.-17 The commenter proposes that the EIR and the project be changed such that the project mitigate for the impacts of the ACDD and Calaveras Dam with respect to blocking spawning and rearing habitat for steelhead, impairing flows in Alameda Creek, and changing downstream habitat. The commenter also proposes that the project provide for some form of migratory fish passage at the ACDD and Calaveras Dam.

Please refer to Section 10.2, and specifically to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and California Department of Fish and Game (CDFG), and Unimpaired Flows, regarding the obligation of the CDRP to mitigate for impacts associated with operation of the existing ACDD and Calaveras Dam. Refer to Section 10.4, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, regarding the effects of the project related to creating barriers to fish movement/migration as well as effects of project operations on downstream fisheries and aquatic habitats.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-Acterra et al.-18 The commenter proposes that the EIR and the project be changed such that mitigation be located on private, not public, land.

Please refer to Response O-ACA&CBD1-62. For information regarding the watershed approach taken in selecting mitigation sites, refer to Responses ACPWA-14 and ACPWA-36.

O-Acterra et al.-19 The commenter proposes that the EIR and the project be changed such that GHG emissions from construction be fully mitigated, such as through the purchase of approved carbon offsets.

Please refer to the master response presented in Section 10.5, Greenhouse Gas Emissions, and specifically to Section 10.5.2, Construction GHG Emissions Impacts and Mitigation, for responses to comments regarding the adequacy of the EIR construction GHG emissions mitigation, as well as a discussion of the use of GHG emission offsets as mitigation.

11.2.7 AMERICAN FISHERIES SOCIETY, CALIFORNIA-NEVADA CHAPTER, MICHELLE WORKMAN, PRESIDENT, 12/18/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

O-AFS-01 The comment, which conditionally supports rebuilding Calaveras Dam as quickly as possible to benefit public safety and ensure a reliable water supply, is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-AFS-02 The comment states that San Francisco's water system can and should be operated in a manner that provides adequate stream flow for native anadromous salmonids, and that the major issue that needs to be resolved is whether operation of the restored reservoir will allow for the restoration of anadromous steelhead trout below the dam.

EIR pages 3-69 – 3-70 (Vol. 1, Chapter 3, Section 3.6.6) and Vol. 3, Appendix J discuss the proposed flow schedules for steelhead associated with the Draft EIR project. Section 6.2.3.3 (Vol. 2, Chapter 6) in the EIR describes and analyzes cumulative impacts on fisheries and aquatic habitats in the Alameda Creek watershed. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion on the proposed flow schedules and potential project effects to steelhead and the proposed monitoring and adaptive management strategy.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the Alameda Creek Diversion Dam (ACDD), installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an Adaptive Management Implementation Plan (AMIP). Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant, and Appendix N in this Comments and Responses document for a copy of the AMIP.

O-AFS-03 The comment states that Fish and Game Code Section 5937 requires "the owner of any dam to allow sufficient water at all times through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through a dam, to keep in good condition any fish that may be planted or exist below the dam." The comment also states that the federal Endangered Species Act (FESA) also requires the SFPUC to provide sufficient water for federally protected steelhead trout.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for response to comments on the state Fish and Game Code. The SFPUC is currently involved in an ongoing Section 7 consultation with the National Marine Fisheries Service (NMFS) pursuant to FESA. Please see Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments on FESA.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. These enhancements were developed in close coordination with NMFS and California Department of Fish and Game (CDFG). Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-AFS-04 The comment recommends that after all of the barriers to upstream adult steelhead migration in the lower watershed are removed, flows for steelhead be provided by the SFPUC to enable steelhead to reach the upper watershed. The comment states that the proposed streamflow releases described in the Draft EIR are designed for resident rainbow trout, not migratory anadromous steelhead trout, and should address the habitat needs of steelhead trout, and that minimum stream flows downstream of SFPUC dams should be consistent with those determined by NMFS, CDFG, and the State Water Resources Control Board (SWRCB).

The SFPUC has been working with other stakeholders to address barriers to adult migration in the lower watershed, including the SFPUC's previously completed removal of Niles and Sunol Dams. EIR pages 3-69 – 3-70 (Vol. 1, Chapter 3, Section 3.6.6) and Vol. 3, Appendix J provide a discussion on the proposed flow schedules for steelhead associated with the Draft EIR project. Section 6.2.3.3 (Vol. 2, Chapter 6) in the EIR describes and analyzes cumulative impacts on fisheries and aquatic habitats in the Alameda Creek watershed. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion on the proposed flow schedules and potential project effects to steelhead and the proposed monitoring and adaptive management strategy.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for response to comments on the state Fish and Game Code. The SFPUC is currently involved in an ongoing Section 7 consultation with NMSF pursuant to FESA. Please see Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments on FESA

Various components of the CDRP are subject to review and final approval by the Regional Water Quality Control Board (RWQCB), which implements state water quality regulations on behalf of the SWRCB. as they pertain to protection of beneficial uses of water, and may therefore be modified through final approval processes. Refer to EIR page 3-72 (Vol. 1, Chapter 3, Section 3.7.3) for a description of RWQCB requirements. The are no specific permits or additional approvals required directly from the SWRCB for this project.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. These enhancements were developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-AFS-05 The comment states that the project should mitigate for the impacts of the Calaveras Dam and ACDD by providing for migratory fish passage at both facilities.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for the response to comments on fish passage issues, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for the response to comments on effects on steelhead and the CDRP's monitoring and adaptive management strategy.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. These enhancements were developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-AFS-06 The comment recommends that restoration and enhancement of steelhead runs in Alameda Creek below the dam be included in the project as a primary or secondary goal. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals, for response to this comment.

11.2.8 OHLONE AUDUBON SOCIETY, INC., EVELYN M. CORMIER, PRESIDENT, 12/5/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-AudOh1-01 The comment states that the flow needs for steelhead and salmon during different times of the year were not adequately addressed.

EIR pages 3-69 and 3-70 (Vol. 1, Chapter 3) and Appendix J (Vol. 3) provide a discussion of the proposed flow schedules for steelhead. EIR pages 6-23 – 6-32 (Vol. 2, Chapter 6, Section 6.2.3.3) describe and analyze cumulative impacts on fisheries and aquatic habitats in the Alameda Creek watershed. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments related to the analysis of project effects on steelhead and the proposed monitoring and adaptive management strategy. A more detailed description of the hydrologic study that was used to determine the amount of water needed to support steelhead is provided in the *Calaveras Dam Replacement Project, Fisheries Technical Report* (ETJV 2008; see Appendix A of that report). A copy of this report is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2005.0161E. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for responses to comments on Chinook salmon.

O-AudOh1-02 The comment states that the SFPUC should adhere to its stewardship policy and comply with state and federal laws by providing sufficient water in Alameda Creek for the year-round survival of native fish.

See Response A-CDFG-10 regarding consistency with the SFPUC's Water Enterprise Environmental Stewardship Policy; see the master response in Section 10.4, Fisheries, Section 10.4.5, Current and Proposed Operations of the

ACDD and Calaveras Dam, and specifically the subsection entitled "Compliance with the Fish and Game Code" regarding compliance with state laws; and see Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead as well as Responses O-ACA&CBD1-24, -26, -27, and -29 regarding consistency with the federal Endangered Species Act.

References

EDAW & Turnstone Joint Venture (ETJV). 2008. *Calaveras Dam Replacement Project, Fisheries Technical Report 2008.* Prepared by Hagar Environmental Science and Thomas R. Payne and Associates for EDAW & Turnstone Joint Venture and SFPUC.

11.2.9 OHLONE AUDUBON SOCIETY, INC., RICH CIMINO, 11/10/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

O-AudOh2-01 The comment states that there appears to be a lack of accurate information on the evaluation of baseline streamflow to support anadromous fishery and that using the 2002 flows as a baseline is misleading to the reader.

Please refer to the master response presented in Section 10.2, Baseline Used in the Environmental Analysis, and specifically to Section 10.2.3, Baseline Considerations Regarding California Department of Water Resources Division of Safety of Dams (DSOD) Restrictions, the 1997 Memorandum of Understanding (MOU) Between the San Francisco Public Utilities Commission (SFPUC) and the California Department of Fish and Game (CDFG), and Unimpaired Flows, for responses to comments on the baseline used in the Draft EIR. Please also refer to the master response presented in Section 10.3, Hydrology, specifically to Section 10.3.2, Hydrologic Modeling, and the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments related to the proposed flow schedules and analysis of project effects on steelhead and the proposed monitoring and adaptive management strategy.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the Alameda Creek Diversion Dam (ACDD), installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an Adaptive Management Implementation Plan (AMIP). Please refer to Appendix N in this Comments and Responses document for a copy of the AMIP. These enhancements were developed in close coordination with the National Marine Fisheries Service (NMFS) and the California Department of Fish and Game (CDFG). Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-AudOh2-02 The comment states that the SFPUC should supply computer modeling by year from 2002 to date.

The SFPUC cannot provide modeling results from 2002 to date because it did not simulate flows in Alameda and Calaveras Creeks in the years after 2002, due to the fact that the hydrologic records used in the SFPUC's HH/LSM extend from 1920 to 2002. The period of 1920 to 2002 provides a sufficiently broad range of hydrologic conditions to allow examination of the differences between the existing condition (Calaveras Reservoir capacity restricted by the DSOD) and conditions with the CDRP in place.

A rough comparison can be made between flows in Alameda and Calaveras Creeks in the years after 2002, with and without the CDRP, by first determining the water year type (wet, above normal, normal, below normal, or dry) in the year of interest. A comparison of flows in Calaveras Creek with and without the CDRP in the appropriate year type can be found in Tables 4.6.16 and 4.6.17 on EIR pages 4.6-72 and 4.6-73 (Vol. 1, Chapter 4, Section 4.6, Impact 4.6.4). A comparison of flows in Alameda Creek downstream of the ACDD with and without the CDRP in the appropriate year type can be found in Tables 4.6.18 and 4.6.19 on EIR pages 4.6-81 and 4.6-82. A comparison of flows in Alameda Creek below the Calaveras Creek confluence with and without the CDRP in the appropriate year type can be found in Tables 4.6.20 and 4.6.21 on EIR pages 4.6-91 and 4.6-92.

Refer also to the master response presented in Section 10.3, Hydrology, specifically to the subsection entitled "HH/LSM" in Section 10.3.2, Hydrologic Modeling, which discusses modeling information used in the EIR analysis, including the use of non-modeling data such as stream gage data.

O-AudOh2-03 The comment states that Calaveras Dam and the ACDD appear to possibly block spawning and rearing habitat for steelhead and that the streamflows are not satisfactory. The comment also states that the SFPUC Habitat Conservation Plan needs to address summer flows to support migratory habitat.

EIR page 4.5-56 (Vol. 1, Chapter 4, Section 4.5) provides an analysis of effects of the project on creating barriers to fish movement/migration. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP

Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for response to comments on barriers, streamflows, and for information on the Alameda Watershed HCP (see the discussion under "SFPUC Environmental Stewardship and Alameda Creek Fisheries Restoration Workgroup" in Section 10.4.7).

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. These enhancements were developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-AudOh2-04 The comment suggests that the SFPUC should think outside the box by doing what is best long term for the fishery.

This comment does not address the accuracy or adequacy of the EIR. For informational purposes, please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for discussions of future operations in relation to fisheries in Alameda Creek.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. These enhancements were developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-AudOh2-05 The comment states that with the capacity of Calaveras Reservoir restored, there should be water to share between municipal consumption and release for fish. The comment also states that water conservation by users in the SFPUC service area could offset water losses attributable to releases for fish.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for discussions on the proposed flows schedules for fish.

With regard to water conservation, the SFPUC has already assumed that some of its future water demand would be met by aggressive water conservation measures and wastewater reclamation. Please see the Water System Improvement Program (WSIP) Program EIR (PEIR) for details.

O-AudOh2-06 The comment states that the project needs to support a cold water steelhead population.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments related to the proposed flow schedules and analysis of project effects on steelhead and the proposed monitoring and adaptive management strategy for this species and others.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. These enhancements were developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-AudOh2-07 The comment questions why Chinook salmon have not been addressed in the Draft EIR.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for responses to comments related to Chinook salmon.

O-AudOh2-08 The comment states that the SFPUC needs to prepare for additional species that may attempt to naturally establish themselves in the Alameda Creek watershed.

The comment is noted. The proposed operations of the ACDD and Calaveras Dam are intended to provide suitable habitat conditions for multiple species. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding the Alameda Watershed Habitat Conservation Plan (HCP), (see discussions under “Cumulative Impacts on Steelhead” and “Monitoring and Adaptive Management”) which the SFPUC is completing to provide long term coverage under FESA for regional water system operations and maintenance in the southern Alameda Creek watershed. Please refer to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for responses to comments related to other anadromous fish species.

11.2.10 THE BAY AREA COUNCIL, GEORGE BRODER, 11/12/09[1]

Note to Reader:	After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.
O-BAC -01	The comment supports moving forward with the Draft EIR so that the SFPUC can act to take care of environmental and regulatory responsibilities and serve people with water. The comment is acknowledged. The EIR discusses regulatory and environmental issues applicable to the proposed project in Chapter 4 under the various "Regulatory Framework" and "Impacts" subsections (Vol. 1 and Vol. 2). The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 29 – 31. Commenter also submitted a letter from the Association of Bay Area Governments, which is included in this Comments and Responses document as A-ABAG. See page 11.1.9-1 of this Comments and Responses document

11.2.11 CARPENTERS LOCAL 22, MANNY FLOREZ, 11/12/09[1]

O-CL22-01 The comment expresses support for the EIR and the project and concern for the need for an emergency water supply.

The comment is acknowledged.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, page 40.

11.2.12 WEINBERG, ROGER & ROSENFELD, REPRESENTING CARPENTERS UNION LOCAL 713

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

O-CL713-01 The comment requests the SFPUC continue to work with the Alameda Creek Fisheries Restoration Workgroup to ensure adequate flows are provided and maintained for downstream fish and adopt mitigation measures to ensure adequate flow is maintained.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Sections 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding flow schedules and effects on fish and fish habitat. Also see Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the SFPUC's involvement with the Alameda Creek Fisheries Restoration Workgroup and for responses to comments regarding proposed instream flow schedules.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, as well as construction of a fish ladder at the Alameda Creek Diversion Dam (ACDD), installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an Adaptive Management Implementation Plan (AMIP). These enhancements were developed in close coordination with the National Marine Fisheries Service (NMFS) and California Department of Fish and Game (CDFG). Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The CDRP Variant and the Draft EIR Project are both addressed in the master response sections referenced above.

O-CL713-02 The comment requests that the SFPUC consider as additional mitigation a fish relocation plan, to be developed in consultation with NMFS, which incorporates measures to minimize stress on the fish to be relocated.

In response to this comment, the SFPUC will prepare a fish relocation plan if required by CDFG as a condition of the streambed alteration agreement required for the project. Note that effects on resident rainbow trout and non-marine fish species are not within the purview of NMFS.

O-CL713-03 The comment requests that the SFPUC consider additional mitigation measures to ensure the dams can more readily accommodate fish ladders in the future when downstream impediments to steelhead are removed.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding fish passage at the ACDD and Calaveras Dam.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes construction of a fish ladder at the ACDD as well as revised flow schedules, installation of a fish screen at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. These enhancements were developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The CDRP Variant and the Draft EIR Project are both addressed in the master response sections referenced above.

O-CL713-04 The comment summarizes fishery flow releases described in the EIR and states that additional studies should be considered to further mitigate the project's impacts and benefit rainbow trout and steelhead. Suggested areas of further study consist of detailed investigation of flow needs and thermal requirements for:

- Rearing steelhead or rainbow trout in Alameda Creek downstream of the Calaveras Dam or the ACDD;
- Steelhead during the parr-smolt transformation (smoltification) in the Alameda Creek Watershed; or
- Rearing rainbow trout upstream of Calaveras Dam or the ACDD.

The comment suggests that until these studies are completed it is not possible to properly determine the impacts of project flow releases on steelhead and rainbow trout. The comment provides suggested timing for the studies, either as the Final EIR is being prepared or prior to the completion of project construction, as long as the SFPUC commits to implementing feasible mitigation based on the study results prior to project operation. The intent of this comment is to ensure that the project flow releases for rainbow trout and steelhead achieve their desired effect.

The various studies, monitoring, and adaptive management measures described in the EIR fulfill this intent. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Sections 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the adequacy of the proposed bypass flows as well as a summary of original monitoring and adaptive management requirements. Please also refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding original monitoring and adaptive management requirements specific to this species.

Although the monitoring and adaptive management measures described in the EIR may not exactly match those suggested in the comment, they are adequate to support the impact analysis and conclusions contained in the EIR concerning the effects of project operations on resident rainbow trout and steelhead. The analysis in the EIR is consistent with CEQA's substantial evidence standards of relying on "…facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts." (see CEQA Guidelines Section 15064(f)(5)) Once meeting the substantial evidence standard, CEQA does not require experts to agree, stating in Guidelines Section 15151, "Disagreement among experts does not make an EIR inadequate…. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort to disclose." The reference to experts is relevant as this comment mirrors a comment from A.A. Rich and Associates addressed below in Response O-CL713-12. See Response O-CL713-10 for information on the nexus between comments from A.A. Rich and Associates and this overall comment letter. Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes an AMIP. The AMIP, which was developed in close coordination with NMFS and CDFG, includes multiple monitoring and study efforts and mechanisms to respond to the results of those efforts. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-CL713-05 The comment states that thermal requirement for salmonids are site-specific and suggests that thermal bioenergetics physiology studies are the best method for determining thermal requirements for fish and the impacts of changing water temperatures on salmonids.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft Project and CDRP Variant, and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding flow and water temperature studies that have been conducted in support of the development of the proposed instream flow schedules. Please also refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the analytical methods used to evaluate habitat requirements for steelhead in the Alameda Creek watershed, and original monitoring and adaptive management requirements specific to this species.

Additionally, as indicated in the preface to these responses and in Response O-CL713-04, the SFPUC has developed the CDRP Variant, which includes an AMIP. The AMIP, which was developed in close coordination with NMFS and CDFG, includes multiple monitoring and study efforts and mechanisms to respond to the results of those efforts. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant and to Appendix N for a complete description of the AMIP.

Although the monitoring and adaptive management obligations to be undertaken by the SFPUC and others may not include the specific methods suggested in the comment, they are adequate to support the impact analysis and conclusions contained in the EIR concerning the effects of project operations on resident rainbow trout and steelhead. Also see Response O-CL713-04, above, regarding application of CEQA's substantial evidence standard and issues of disagreement among experts.

O-CL713-06 The comment states that the SFPUC should refine the proposed rainbow trout monitoring to include specific studies consisting of:

- Cause-and-effect studies that would determine whether bypass flows at the ACDD and flow releases at Calaveras Dam sustain resident rainbow trout populations in Alameda Creek downstream of the ACDD;
- A thermal bioenergetics physiology study by a fish physiologist that would determine both the optimal temperature for rearing and

smoltification and the impacts of the proposed flow schedules on rearing (for rainbow trout and steelhead) and on smoltification (for steelhead); and

- Flow studies that determine the impacts of the proposed flow schedules on rearing and smoltification.

The comment provides suggested timing for the studies (either as the Final EIR is being prepared or prior to the completion of project construction), as long as the SFPUC commits to implementing feasible mitigation based on the study results prior to project operation.

This comment reiterates requests made in prior comments. Please see Responses O-CL713-04 and O-CL713-05, above.

O-CL713-07 The comment requests that the SFPUC consider as additional mitigation a fish relocation plan, to be developed in consultation with NMFS that incorporates measures to minimize stress on the fish to be relocated. The plan would apply to resident rainbow trout relocated from the construction area below Calaveras Dam. The comment also suggests that one or more fishery biologists implement the relocation.

This comment reiterates requests made in a prior comment. Please see Response O-CL713-02, above. Relocation activities would be undertaken by qualified biologists.

O-CL713-08 The comment states that the EIR should respond to the anticipated restoration of steelhead runs to the upper Alameda Creek watershed by designing elements of Calaveras Dam and the ACDD to better accommodate the future installation of fish ladders.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding fish passage at the ACDD and Calaveras Dam. Please also refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the EIR's consideration of the future cumulative scenario, in which it is assumed that steelhead access to the watershed has been restored upstream of the BART weir.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes construction of a fish ladder at the ACDD. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The CDRP Variant and the Draft EIR Project are both addressed in the master response sections referenced above.

O-CL713-09 The comment states that the project should include a design to accommodate future fish ladders, and that the EIR should include a discussion of the project's potential future impacts on steelhead above the two dams once access above the dams is restored.

See Response O-CL713-08 regarding fish ladders/fish passage. Potential future impacts on steelhead resulting from access to the area above the ACDD would be addressed through the monitoring and adaptive management program. Please refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding monitoring and adaptive management originally proposed for steelhead.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an AMIP. These enhancements, including the AMIP, were developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The CDRP Variant and the Draft EIR project are both addressed in the master response sections referenced above.

O-CL713-10 Comments O-CL713-01 through O-CL713-09, addressed above, are provided in a letter prepared by Windberg, Rogers & Rosenfeld (WR&R) on behalf of Carpenters Union Local 713. Attached to the letter is an evaluation of the Draft EIR prepared by A.A. Rich and Associates at the request of WR&R. The attached A.A. Rich letter contains Comments O-CL713-10 through O-CL713-20.

The comment states that some impacts on salmonids described in the Draft EIR need further analysis, and that additional mitigation measures would reduce impacts on salmonids.

This is an introductory statement, with detailed comments on these topics provided later in the comment letter. Please see Responses O-CL713-12 through O-CL713-20, below.

O-CL713-11 The comment summarizes the benefits that the proposed project would provide for rainbow trout and steelhead. The comment is noted, and no further response is required.

O-CL713-12 Many of the comments in the WR&R letter repeat or summarize comments from the A.A. Rich letter. Such is the case for this comment, Comment O-CL713-12, which contains very similar information to Comment O-CL713-04; therefore, please see Response O-CL713-04.

O-CL713-13 The comment addresses the same fish capture and relocation issues expressed in Comments O-CL713-02 and O-CL713-07. Please see Responses O-CL713-02 and O-CL713-07.

O-CL713-14 The comment addresses the same issues expressed in Comments O-CL713-05 and O-CL713-06. Please see Responses O-CL713-05 and O-CL713-06.

O-CL713-15 The comment addresses the same issues expressed in Comment O-CL713-06. Please see Response O-CL713-06.

O-CL713-16 The comment summarizes steelhead flow releases identified in the Draft EIR and states that these releases appear to be based only on flow requirements for spawning rainbow trout and steelhead. The comment suggests that further studies are needed to determine flow releases for other rainbow trout and steelhead life stages.

The EIR evaluates all functional life-stage habitat requirements for steelhead in the Alameda Creek watershed (i.e., spawning and egg incubation, rearing, and migration) and assesses potential effects throughout both the primary and extended study areas using detailed flow and water temperature modeling and analysis, PHABSIM modeling studies, review of other studies, and extensive review of hydrologic data in coordination with NMFS and CDFG that represents the best available science.. The proposed flow releases for the Draft EIR project, coupled with required monitoring and adaptive management, are considered sufficient to ensure appropriate conditions are provided for all rainbow trout and steelhead life stages. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the 1997 Memorandum of Understanding and the adequacy of the proposed bypass flows.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules and an AMIP. These enhancements were developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The CDRP Variant and the Draft EIR Project are both addressed in the master response sections referenced above. Also see Response O-CL713-04, above, regarding application of CEQA's substantial evidence standard and issues of disagreement among experts.

O-CL713-17 The comment questions the use of the PHABSIM model for the Draft EIR analysis; lists several assumptions embedded within the PHABSIM model; and states that many of these assumptions, as well as the overall use of the PHABSIM model, have been questioned by researchers over the years. The comment also states that no site-specific observations of rainbow trout were made and no steelhead are present for observation, to assist in determining habitat suitability criteria. The comment requests that the Final EIR discuss these uncertainties when determining flow requirements, and that the results of the PHABSIM model should be validated by site-specific observation and study. The comment also states that decisions on long-term management of rainbow trout and steelhead in the watershed should not be made without the suggested site-specific study and validation.

The various studies, monitoring, and adaptive management measures described in the EIR are considered the best available science and are adequate to support the analysis of impacts and conclusions regarding the effects of project operations on resident rainbow trout and steelhead. The PHABSIM model is used by professionals in the field of fisheries biology and its use is generally supported by resource agencies as a tool for developing instream flows. The PHABSIM model analysis was supported by extensive field observations, other studies, the professional opinion of experts, and through coordination with NMFS and CDFG. Further, the purpose of the proposed AMIP is to address and resolve uncertainties related to implementation of the proposed CDRP and the associated effects on habitat conditions for future steelhead and other native fish species in the upper Alameda Creek watershed. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the studies and modeling tools used in the EIR and their adequacy in supporting the analysis of impacts and mitigation. Please also refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the originally proposed monitoring and adaptive management requirements that would ensure that the desired benefits to the aquatic community are achieved.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules and an AMIP. These enhancements were developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The CDRP Variant and the Draft EIR Project are both addressed in the master response sections referenced above.

Although the monitoring and adaptive management obligations to be undertaken by the SFPUC and others may not exactly match those suggested in the comment, they are adequate to confirm the results of the PHABSIM model and support the impact analysis and conclusions contained in the EIR concerning the effects of project operations on resident rainbow trout, steelhead, and other native aquatic species. Also see Response O-CL713-04 above regarding application of CEQA's substantial evidence standard and issues of disagreement among experts.

O-CL713-18 The comment expresses agreement with the NMFS suggestion that fish passage be provided at the Calaveras Dam and the ACDD. The comment recommends that the Final EIR include project modifications that incorporate design measures in Calaveras Reservoir and the ACDD that facilitate the future installation of fish ladders.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding fish passage at the ACDD and Calaveras Dam and for revisions to the EIR regarding fish passage commitments.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes construction of a fish ladder at the ACDD. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The CDRP Variant and the Draft EIR Project are both addressed in the master response sections referenced above.

O-CL713-19 The comment suggests that the proposed project should include the eventual presence of steelhead both downstream of Calaveras Dam and upstream of Calaveras Dam and the ACDD.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the analysis of potential cumulative impacts in the EIR, in which it is assumed that steelhead access to the watershed has been restored upstream of the BART weir. Sections 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, also provide responses to comments regarding proposed flows schedules for steelhead and the native aquatic community and fish passage at the ACDD and Calaveras Dam

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes construction of a fish ladder at the ACDD. Section 9.3 in Chapter 9 of this Comments and Responses document includes an analysis of steelhead presence above the ACDD. In addition, the CDRP Variant is addressed in the master response sections referenced above.

O-CL713-20 The comment recommends an interdisciplinary approach for mitigation that involves aquatic habitat restoration mitigation. An example is given of fishery biologists, hydrologists, and ecologists working collaboratively.

A multidisciplinary collaborative approach was taken in preparation of the EIR and such an approach is expected to continue as applicable through the implementation of mitigation measures. During preparation of the EIR, fishery biologists, terrestrial biologists, and hydrologists worked closely to assess the interaction of project effects and mitigation measures as they applied to fishery resources, hydrology, and water-dependent wildlife such as California red-legged frog. Such collaboration will be maintained, and in many cases intensified, to ensure successful implementation of mitigation measures. For example, monitoring and adaptive management related to flow releases for fish will involve a fishery biologist to assess effects on fish species and a hydrologist to assess the physical conditions in the aquatic habitat as released flows move downstream. Mitigation/compensation areas that involve aquatic habitat will involve a wetland ecologist to ensure wetland functions and values are achieved, a wildlife biologist to ensure that appropriate habitat conditions for target species (e.g., California red-legged frog) are achieved, and a hydrologist to ensure that the watershed inputting runoff into the mitigation/compensation area is sufficient to support the aquatic habitat.

Monitoring, adaptive management, and success criteria included in the EIR mitigation measures ensure appropriate collaboration among technical specialists in the successful implementation of mitigation measures.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for a summary of monitoring and adaptive management requirements originally proposed for fishery resources. Please also refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a summary of monitoring and adaptive management requirements originally proposed for steelhead.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes an AMIP. The AMIP was developed in close coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. In addition, the CDRP Variant and the AMIP, as appropriate, are addressed in the master response sections referenced above.

11.2.13 CALIFORNIA NATIVE PLANT SOCIETY, SANTA CLARA VALLEY CHAPTER, KEVIN BRYANT, 12/21/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-CNPS1-01 The comment, stating that dam renovation is needed to ensure water supplies for San Francisco and Peninsula communities, is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no response is required.

O-CNPS1-02 The comment expresses the opinion that impacts of the borrow pits and disposal areas on wetlands have not been minimized and questions what alternatives can be considered.

Habitats and special-status species in the Vegetation and Wildlife Study Area are identified and described on EIR pages 4.4-6 – 4.4-19 (Vol. 1, Chapter 4, Section 4.4.1.1). Impacts of construction on wetlands, including the impacts of using the proposed on-site borrow areas and disposal sites, are discussed in Impact 4.4.1, on EIR pages 4.4-75 – 4.4-78. As described on EIR page 3-43 (Vol. 1, Chapter 3, Section 3.5.1.6), the analysis of candidate disposal sites and selection of the proposed disposal sites, which included resource agency participation, involved detailed efforts to avoid and minimize impacts to biological resources such as wetlands and special-status species (URS 2008). Several candidate disposal sites were eliminated from the project due to potential biological impacts. Design changes also included using efficient design to minimize production of surplus rock (e.g., minimizing excavations, maximizing reuse of rock) and reducing the size and shape of the disposal areas to reduce impacts on streams and wetlands (see, e.g., EIR page 3-48, where the description of Disposal Site 3 explains that the footprint of the disposal site was reconfigured to minimize impacts on the existing perennial stream).

Mitigation measures are identified in the EIR (Vol. 2, Chapter 5, Section 5.4) to reduce impacts of the borrow and disposal areas on wetlands and other biologically-important habitats to less-than-significant levels.

The CDRP Variant includes modifications to Borrow Area E that are designed to improve conditions for re-establishment of seasonal wetlands in a portion of this area (see Chapter 9, Section 9.2.2, subsection entitled "Borrow Area E Modifications").

Chapter 7 of the EIR presents the CEQA analysis of alternatives to the proposed project, including three alternatives intended to reduce impacts on vegetation and wildlife that would result from use of on-site disposal sites and borrow areas: Alternative 2, Off-Site Disposal; Alternative 3, Off-Site Borrow; and Alternative 4, Consolidated On-Site Disposal (see EIR pages 7-32 – 7-57 in Vol. 2, Chapter 7). Alternative 2, Off-Site Disposal, would involve disposal of excess unusable earth and rockfill materials at an off-site location and would avoid impacts on Disposal Sites 3 and 7. Alternative 3, Off-Site Borrow, would involve obtaining rockfill and clay for dam construction from off-site locations and would avoid impacts on Borrow Areas B and E. Alternative 4, Consolidated On-Site Disposal, would eliminate use of one of the disposal areas. While the alternatives analysis determined that all three of these alternatives would result in decreased impacts on biological resources compared to the proposed project, all of these alternatives would result in an increase of other impacts and/or create new impacts that would not occur under the proposed project. Alternatives 2 and 3 would result in a substantial increase in the number of truck trips and haul distances as well as increase the overall construction duration by 2 to 4 years; they would also increase transportation, traffic safety, energy, and air quality impacts compared to the proposed project. Alternative 4 would increase impacts related to noise, air quality, and fuel consumption. Thus, none of these alternatives were deemed to be the environmentally superior alternative because even though they would reduce impacts on vegetation and wildlife, they would result in substantial additional impacts that would not occur under the proposed project.

O-CNPS1-03 The comment suggests that topsoil 1.5 feet deep be preserved for use during restoration of disturbed areas.

The project would include storage and re-use of topsoil. The depth of topsoil to be removed will vary depending on site specific conditions such as actual topsoil depth, and may be as much 1.5 feet deep. See EIR page 3-45 (Vol. 1. Chapter 3, Section 3.5.1.6).

O-CNPS1-04 The comment requests an explanation of the need for vegetation removal in wetlands and tributary streams.

The project does not propose to remove vegetation in wetlands and tributary streams outside of the construction area. The project has been designed to avoid and minimize vegetation removal where possible. Vegetation removal would be necessary for the borrow areas where rock and other materials needed to construct the dam are located, for the dam foundation and spillway, and for portions of the disposal sites (see EIR pages 3-33 – 3-57, in Vol. 1, Chapter 3, Section 3.5, for a description of construction of the proposed replacement dam). The affected wetlands and streams are described in Section 4.4.1.1 on EIR page– 4.4-8 and pages 4.4-13 – 4.4-18. Impact 4.4.1 discusses the effects of project construction on wetland habitats on EIR pages 4.4-75 – 4.4-78. Mitigation Measures 5.4.1, 5.7.1, 5.4.2, and 5.4.3 would reduce the impacts to less-than-significant levels (Vol. 2, Chapter 5, Sections 5.4 and 5.7). Mitigation Measure 5.7.1 includes a specific feature to "avoid disturbance of riparian and wetland vegetation by installing flagging and temporary fencing," as described on EIR page 5-18.

O-CNPS1-05 The comment suggests that mitigation plantings be installed early in the construction process to reduce potential water quality impacts during the rainy season.

As described in Mitigation Measure 5.7.1 (Vol. 2, Section 5.7, EIR pages 5-18 – 5-25) a Storm Water Pollution Prevention Plan (SWPPP) is required to be prepared to protect water quality during construction, including extensive erosion control measures, turbidity barriers, sediment retention basins, and treatment prior to discharge. Other Best Management Practices (BMPs) that are recommended as part of the SWPPP include a wet weather contingency plan, ongoing inspection, maintenance, repair and reporting of erosion controls and other BMPs, preservation of existing vegetation (EIR page 5-18), and implementation of a re-vegetation plan.

O-CNPS1-06 The comment requests clarification on compensation ratios and believes the timing of compensatory mitigation is too extended.

Mitigation Measure 5.4.3e does not prescribe specific mitigation ratios but instead requires that the final habitat compensation plans ensure no net loss of habitat areas, functions, and services, and identifies the factors that will be used to determine compensation ratios on page 5-12 (Vol. 2, Section 5.4). These factors include the likelihood of success; differences between the habitat functions and services lost and those expected to be provided by the compensation; temporal losses of resource functions and services; and the distances between the affected habitat and compensation sites. The timeframes presented in the compensation measures under Mitigation Measure 5.4.3 (EIR pages 5-10 – 5-12) are to ensure that restoration occurs within those timeframes after construction and would be consistent with all required permits. Replanting and grading for compensatory mitigation would begin as soon as practicable, but no later than one year following construction completion. The lengths of time proposed to complete restoration are goals for meeting success criteria. See also Responses A-CDFG-22, A-CDFG-30, A-RWCQB-16, and O-ACA&CBD1-64.

The lengths of time proposed to complete restoration are goals for meeting success criteria. See also Responses A-CDFG-22, A-CDFG-30, and O-ACA&CBD1-64.

O-CNPS1-07 The comment refers to provisions of the National Environmental Policy Act (NEPA) that support avoiding environmental impacts.

As part of development of the CDRP, the SFPUC evaluated and designed all project components to avoid and minimize impacts on environmental and cultural resources, while also meeting requirements for dam safety and constructability. The U.S. Army Corps of Engineers has completed an alternatives analysis for the project (URS 2009) and is preparing a separate environmental review document pursuant to NEPA in its capacity as the lead federal permitting agency.

The EIR is prepared pursuant to the California Environmental Quality Act (CEQA), which supports the use of mitigation measures or alternatives that reduce or eliminate significant environmental impacts (see, e.g., California Public Resources Code Sections 21000, 21001, and 21002). The CDRP EIR identifies mitigation measures and alternatives that reduce many, but not all, of the significant impacts of the proposed project to less-than-significant levels, and presents and analyzes alternatives that would substantially lessen or avoid one or more of the significant impacts that would result from the proposed project. In particular, Mitigation Measure 5.4.1 on EIR pages 5-2 –5-9 (Vol. 2, Chapter 5, Section 5.4) includes features intended to avoid and minimize impacts on special-status species and sensitive habitats.

O-CNPS1-08 The comment suggests vegetation and wildlife mitigation measures or conservation easements be carried out on lands not already owned and managed by the SFPUC.

See Responses A-ACPWA-1, A-EBRPD-12, and O-ACA&CBD1-62 for a discussion of these issues.

O-CNPS1-09 The comment requests that the natural integrity of the Calaveras Reservoir site be respected for its value to wildlife and for the biodiversity of the plant species that represent early California landscape.

The EIR thoroughly describes the existing vegetation, wildlife, fisheries, and aquatic habitats in and around the construction areas for the proposed project in Sections 4.4 and 4.5 (Vol. 1, Chapter 4). An extensive mitigation program to protect and restore habitats for special-status species is included in Mitigation Measures 5.4.1 and 5.4.2 (Vol. 2, Chapter 5).

O-CNPS1-10 The comment requests that the SFPUC allow volunteer biologists to collect seeds in the Calaveras Reservoir watershed to propagate and return to the site.

This comment is acknowledged. The commenter is encouraged to contact the San Francisco Public Utilities Commission's Land and Natural Resources Division at (415) 554-3265 (phone number), (415) 934-5770 (fax number), or through the "Contact Us" link on the SFPUC's web page (http://sfwater.org) to make arrangements to obtain access to the Calaveras Reservoir watershed. In addition, an SFPUC staff contact person has been identified and the SFPUC will contact the California Native Plant Society. The SFPUC's adopted Alameda Watershed Management Plan states that the SFPUC should "encourage and allow investigations of special-status plants and communities on the watershed to further the SFPUC's understanding of the watershed's vegetation and its condition."

O-CNPS1-11 The comment refers to an attachment citing individual areas of the Draft EIR where the concerns in comments O-CNPS-2 through O-CNPS-10 are evident.

The statement refers to a comment letter provided by the California Native Plant Society, East Bay and Santa Clara Valley Chapters, dated December 21, 2009. That letter and its responses are provided in Section 11.2.14 of this Comments and Responses document (Response O-CNPS2).

References

URS Corporation (URS). 2008. Calaveras Dam Replacement Project, Alternatives Analyses of Disposal Options for Surplus Soil and Rock. Prepared for the San Francisco Public Utilities Commission. March 5, 2008.

URS Corporation. 2009. Section 404(b)(1) Alternatives Analysis in Compliance with the Clean Water Act, Calaveras Dam Replacement Project. Prepared for the San Francisco Public Utilities Commission, San Francisco, CA. December, 2009. USACE File #29979S.

11.2.14 CALIFORNIA NATIVE PLANT SOCIETY, EAST BAY AND SANTA CLARA VALLEY CHAPTERS, LECH NAUMOVICH AND LIBBY LUCAS, 12/21/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-CNPS2-01 The comment questions the validity of proposed mitigation measures using land that is already owned and protected by the SFPUC and asserts that the Draft EIR is inadequate because it lacks specific mitigation actions and details.

The comment does not provide specific information regarding any deficiencies in the Draft EIR. The EIR includes an extensive mitigation program to protect and restore habitats for special status species and to minimize impacts on sensitive habitats. Mitigation Measures 5.4.1, 5.4.2, and 5.4.3, and Table 5.1 (Vol. 2, Chapter 5) identify potential mitigation sites. Regarding use of lands managed by the SFPUC for mitigation, refer to Responses O-ACA1-06 and O-ACA&CBD1-62. As described on EIR pages 5-12 – 5.14, specific mitigation actions include long-term protection of compensation sites that require implementation of long-term monitoring, maintenance, and management plans, as well as legal arrangements for site ownership or control such as long-term easements. Responses to issues raised about mitigation areas on SFPUC-owned land, and specific mitigation actions are provided in the Response A-EBRPD-13 and O-ACA&CBD1-64.

O-CNPS2-02 The comment notes that the CDRP will create some of the most significant impacts of the Water System Improvement Program (WSIP) and states that the Habitat Reserve Program (HRP) planning efforts must be completed with specific mitigation strategies and an EIR for the HRP must be completed before the CDRP can use those mitigations.

Although the SFPUC is continuing to plan and develop mitigation sites and strategies for individual WSIP projects at the watershed level, the HRP has been discontinued as a separate program for purposes of CEQA analysis. As envisioned under the HRP, the SFPUC intends to coordinate compensatory mitigation actions within each watershed for multiple WSIP projects to provide broader benefits to the affected habitats and species than would be achieved without such coordination (e.g. creation of large contiguous habitat areas serving multiple species and avoidance of habitat fragmentation). However, due to the scheduling of the WSIP projects, the SFPUC has determined that it would be more efficient to address the impacts of implementing these mitigation actions as required by CEQA within the project-specific CEQA documents as part of the related individual WSIP projects for which they would provide mitigation rather than in a separate EIR for the HRP. Implementation and environmental review of mitigation at the identified HRP mitigation areas will therefore be provided on a project-by-project basis. Updated information on the role of the HRP in the WSIP is presented in Section 9.5.1 (Habitat Reserve Program). Compensation proposed for the CDRP in the CDRP EIR is evaluated in adequate detail in the EIR to be implemented as part of the CDRP. Compensation actions would begin as soon as practicable, but no later than one year, following completion of construction (see Response A-CDFG-30), and specific conservation goals and objectives (see Response A-RWQCB-17) would be completed within the timeframes established in Mitigation Measure 5.4.3a (EIR Vol. 2, Vegetation and Wildlife Mitigation Measures, beginning on p. 5-10).

O-CNPS2-03 The comment requests clarification regarding the proposed project's exemption from the Alquist Priolo Earthquake Fault Zoning Act's prohibition on locating structures used for human occupancy across the trace of active faults.

The EIR discusses the Alquist Priolo Earthquake Fault Zoning Act on EIR pages 4.8-17 - 4.8-18 (Vol. 1, Chapter 4, Section 4.8). Page 4.8-18 states that that surface fault rupture and fault activity at dam sites are addressed by Division of Safety of Dams requirements for geologic mapping, subsurface investigation, and evaluation of fault activity. According to the Alquist-Priolo Earthquake Fault Zoning Act, construction of a structure for human occupancy within 50 feet of the trace of a known active fault is prohibited. On EIR page 4.8-15, Calaveras Reservoir is identified as being at the boundary between the northern and central segments of the Calaveras Fault, and the discussion states that the existing Calaveras Dam and the proposed replacement dam are not underlain by a trace of the Calaveras Fault. The EIR discussion notes that the only project-related component that crosses the Calaveras Fault is the proposed access road (existing) that extends east from Calaveras Road. The EIR concludes on page 4.8-28 that there would be no hazard of dam failure resulting from ground displacement on the main trace of the Calaveras Fault because the Calaveras Fault zone (as mapped by the Alquist-Priolo program) is located about 1,600 feet west of the proposed replacement dam, and that the proposed dam site is not crossed by any active fault zones. An exemption to the Alquist Priolo Earthquake Fault Zoning Act standards is therefore not needed because the CDRP would not involve construction of buildings for human occupancy across the surface trace of an active fault.

O-CNPS2-04 The comment states that the Draft EIR discussion of impacts on serpentine habitats is difficult to understand and would benefit from inclusion of a geologic map depicting the various substrates. The comment states that the impact discussion in Section 4.8, Geology, Soils and Seismicity, is difficult to understand because it does not indicate the geographic location and extent of impacts. The comment further asks if serpentine is located at Disposal Area 7 and suggests that, if so, the SFPUC could avoid impacts by moving that disposal area to a non-serpentine habitat.

Figure 4.8.1 of the EIR (Vol. 1, Chapter 4, Section 4.8) shows the location of serpentine soils in the vicinity of the dam site. See also new Figure 4.8.1b: Regional Geology and Paleontological Resources Potential in Chapter 12 of this Comments and Responses document, which maps existing geologic units at the project site and vicinity. Serpentine soils are not, in and of themselves, sensitive resources that are protected under CEQA, but they often support sensitive plant communities. Serpentine grasslands and serpentine foothill pine - chaparral woodland in the study area are described in the EIR in Table 4.4.1 on page 4.4-8, under Grasslands on page 4.4-10, and under Woodlands on page 4.4-11 (Vol.1, Chapter 4, Section 4.4). Serpentine foothill pine - chaparral woodland would not be affected by the CDRP, but serpentine grasslands would (EIR Vol. 1, Table 4.4.16, page 4.4-114). The location of serpentine grassland impacts is described in the EIR in Impact 4.4.11, page 4.4-114 (Vol. 1, Chapter 4, Section 4.4). Serpentine grasslands would be affected at Disposal Site 7. See Response O-CNPS2-07 regarding avoidance and minimization of impacts.

O-CNPS2-05 The comment states that the Calaveras Fault zone is shown along different sides of the northern end of the Calaveras Reservoir in Figures 4.8.1 and 4.8.2, and asks which figure is accurate and whether the fault passes under the face of the dam.

The comment correctly notes that the Calaveras Fault is shown along different sides of the northern end of the Calaveras Reservoir in Figures 4.8.1 and 4.8.2.

Figure 4.8.1 on EIR page 4.8-4 (Vol. 2, Chapter 4, Section 4.8) provides detailed information about the Calaveras Fault zone based on multiple geotechnical samples from the area immediately around the dam. Figure 4.8.2 on EIR page 4.8-9 (Vol. 2, Chapter 4, Section 4.8) provides more generalized information about the location of the Calaveras Fault in relation to other faults in the San Francisco Bay region as a whole. Figure 4.8.2 is from the California Geological Survey and is not intended to provide the same level of detail as is Figure 4.8.1.

As stated on EIR page 4.8-28 (Vol. 2, Chapter 4, Impact 4.8.4), "the Calaveras Fault zone (as mapped by the Alquist-Priolo program) is located about 1,600 feet west of the proposed replacement dam. The proposed dam site is not crossed by any active fault zones. Thus, there would be no hazard of dam failure resulting from ground displacement on the main trace of the Calaveras Fault. The only component of the proposed project that would cross an active fault is the proposed permanent and temporary access roads between Calaveras Road and the dam and reservoir area."

O-CNPS2-06 The comment expresses concern that, as shown in Figure 4.8.2, the Calaveras Fault passes underneath the face of the dam, and thus the CDRP would pose seismic safety concerns. See Response O-CNPS2-05, above, for a discussion of Figure 4.8-2, and Response O-CNPS2-03 for a discussion of the applicability of the Alquist-Priolo Act.

O-CNPS2-07 The comment states that avoidance measures should be used as the first line of mitigation for impacts and points out some examples of where CNPS believes that avoidance measures were not fully incorporated (e.g., wetlands, serpentine habitat, riparian woodland).

In accordance with CEQA, lead agencies are required to disclose the significant impacts of a proposed project on the environment and to identify mitigation measures and project alternatives that could lessen or avoid these impacts. However, CEQA does not require project proponents to avoid all potentially significant impacts or to choose the least environmentally damaging alternative. As such, the comment does not address the adequacy or accuracy of the EIR.

Nonetheless, the CDRP has been designed in close coordination with state and federal resource agencies to avoid and minimize impacts on the environment, including wetlands, serpentine habitat, and riparian woodlands. The SFPUC staff engaged in monthly meetings of an Interagency Task Force (IATF) for the

WSIP, including the CDRP, composed of resource agency representatives from National Marine Fisheries Service (NMFS), US Army Corps of Engineers (USACE), US Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB). Listed below, in chronological order from the most recent, is a partial list of the consultations held to date with USACE, USFWS, and/or CDFG, as well as other resource agencies working on the CDRP that are relevant to the concerns expressed in the comment (i.e., avoiding impacts). This partial list is provided to demonstrate the level of effort undertaken by the SFPUC to incorporate avoidance measures into design of the CDRP.

- **January 2009:** Meeting with San Francisco office of the RWQCB regarding appropriate Best Management Practices for the project.
- **October 7, 2008:** CDRP team presentation to IATF on CDRP updated biology impacts[1] and mitigation.
- **September 11, 2008:** Field meeting at upper Alameda Creek watershed with NMFS and CDFG, SFPUC, and consultants.
- **July 18, 2008:** Site visit with CDFG.
- **April 2, 2008:** SFPUC team presentation on CDRP aquatic and terrestrial biological impacts and mitigation to USFWS.
- **March 10, 2008:** CDRP team presentation to IATF on CDRP biological impacts and mitigation.
- **February 26, 2008:** Meeting with RWQCB on responses to comments on disposal options analysis.
- **November 6, 2007:** CDRP team presentation to IATF on disposal site analysis.
- **September 4, 2007:** CDRP team presentation to IATF on avoidance and minimization measures, and a preview of impacts and mitigation.
- **March 6, 2007:** Meeting with SFPUC, project engineers, USFWS, and CDFG held to discuss approaches for avoiding and minimizing effects on bald eagles, and for compensatory mitigation.
- **May 25, 2006:** Site visit to the proposed project area, including CDFG and USFWS. Other staff members were present from San Francisco Planning Department, Major Environmental Analysis Division (MEA), SFPUC, and consultants.
- **August 15 and 24, 2005:** Team site visits of the key locations of the CDRP project area with regulatory agency staff from RWQCB and USACE. Others were present from MEA and consultant team.

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[1] Note that when updates on impacts are identified as a discussion topic, the discussions also included any updates on changes to project planning to avoid or minimize impacts on biological resources including wetlands, serpentine habitat, and riparian woodlands.

- **Ongoing:** Monthly meetings held under direction of USACE and MEA with SFPUC and consultants to discuss project progress and in particular NEPA compliance with the USACE. These meetings have been conducted with USACE since May 2005.

Project components were evaluated based on numerous factors, including potential impacts on natural resources, and impact avoidance and minimization was incorporated into project design. These components were subsequently redesigned several times to further minimize impacts to biological resources. For example, see EIR pages 3-43 – 3-45 (Vol. 1, Chapter 3, Section 3.5.1.6) for a discussion of Disposal Site selection. Also see EIR page 4.4-1, footnote 1, and EIR Impact 4.4.11 on page 4.4-113 (Vol. 1, Chapter 4, Section 4.4), and Response O-CNPS1-02 for consideration of impacts to wetlands and other biological resources.

The CDRP Variant is an additional example of the ongoing modifications to the project. See Chapter 9, "Borrow Area E Modifications," which describes modifications of Borrow Area E to improve conditions for long term re-establishment of seasonal wetlands. Following construction, the SFPUC would restore the Borrow Area E site to facilitate re-establishment of seasonal wetlands on portions of the site.

O-CNPS2-08 The comment expresses concern that the groundwater plume at the former Calaveras Test Site could affect water quality in the reservoir when the water level is raised, particularly because the plume appears to be in the Calaveras Creek channel or floodway.

As discussed on EIR pages 4.9-6 and 4.9-7 (EIR Vol. 1, Chapter 4, Section 4.9), groundwater monitoring conducted between 1994 and 2004 indicated that the size of the groundwater plume at the former Calaveras Test Site was decreasing, and analysis of surface water samples collected down gradient of the site from 1995 to 2003 did not detect volatile organic compounds in the reservoir. As indicated by groundwater monitoring under the direction of the RWQCB, the annual horizontal migration of trichloroethene is reported to be essentially stagnant under existing conditions because the predominant groundwater gradient is shallow and analyte concentrations are undergoing natural degradation and attenuation. An increase in reservoir levels under the proposed project would result in a flatter groundwater gradient than current conditions, thus slowing the groundwater flow and contaminant migration rates and reducing risks to water quality in Calaveras Reservoir, as discussed on EIR page 4.9-30 (Impact 4.9.8). Existing sampling does not indicate that water quality in Calaveras Creek has been affected by the groundwater plume. Therefore, the existing groundwater plume would not affect reservoir water quality under the proposed project, as concluded in Impact 4.9.8.

O-CNPS2-09 The comment states that due to the presence of most-beautiful jewelflower, serpentine soils may be located near Disposal Site 7. The comment asks if Disposal Site 7 will be graded to allow for more fill and cautions that soil disturbance could release heavy metals and impact reservoir and downstream water quality, as well as plant growth.

As described in EIR page 3-49 (Vol. 1, Chapter 3, Section 3.5.1.6), Disposal Site 7 would accommodate approximately 1.06 million cubic yards of material and 0.4 acres of the site would be located below the normal maximum water surface elevation of 756 feet when the reservoir level is restored. A dike would be constructed along the shore of the reservoir in the first year of construction to simulate the natural topography. As stated on EIR page 3-49 in Chapter 3, Project Description (Vol. 1), in order to avoid placing material potentially containing naturally occurring asbestos (NOA) and associated metals below the restored reservoir pool elevation, material placed behind the dike would be compacted Temblor Sandstone and would not contain NOA. In addition, erosion protection measures and benching would be provided for this disposal site to prevent erosion and promote restoration of the slopes. Following completion of use of this disposal site, it would be revegetated with a native grasses erosion control seed mix.

Section 4.7, Water Quality, (Vol. 2, Chapter 4), also addresses the potential for NOA and metals to enter Calaveras Reservoir or be transported downstream, both during construction (Impact 4.7.2, beginning on page 4.7-44) as well as during reservoir refilling (Impact 4.7.4, beginning on page 4.7-57) relating to inundation as well as weathering of NOA- and metals-containing materials. Implementation of Mitigation Measure 5.7.1 requiring the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) and associated best management practices (BMPs) would reduce construction-related impacts on water quality related to the release of metals and NOA. In addition, Mitigation Measure 5.9.2d requires the SFPUC to conduct a soils investigation to identify the extent of rock containing NOA and metals and to prepare an excavated materials management plan to provide for the proper classification and segregation of spoils by geologic type for placement in the disposal sites. With implementation of these mitigation measures, potential water quality impacts resulting from the release of NOA, metals, and other contaminants during construction and subsequent inundation of a portion of Disposal Site 7 would be less than significant.

O-CNPS2-10 The comment states that the Draft EIR does not establish how much of Observation Hill and Hill 1000 will be removed, and asks if excavation at these locations would cause loss of grasslands with Johnny-jump-up habitat and, consequently, impacts on callippe silverspot butterfly.

Excavations at Observation Hill and Hill 1000, as described in the Project Description on EIR page 3-41 (Vol. 1, Chapter 3, Section 3.5.1.4), would occur in the excavation of the left abutment and construction of the spillway and stilling basin. In addition, Borrow Area B is estimated to be approximately 8 acres and would be excavated to a depth of approximately 200 to 280 feet. Loss of grasslands and impacts to callippe silverspot butterfly grassland habitat are discussed in Impact 4.4.5 (Vol. 1, Chapter 4, Section 4.4, on EIR pages 4.4-98 – 4.4-99) and Impact 4.4.9 (Vol. 1, Chapter 4, Section 4.4, on EIR pages 4.4-107 – 4.4-113). As described in the EIR, a small amount (0.57 acres) of grasslands that support johnny jump-up, the sole larval food plant for the callipe silverspot butterfly, would be lost north of the existing dam during construction of the staging areas, but the overall effect on the regional callippe silverspot population is expected to be low. However, there remains a potential that eggs or larvae of this butterfly could be destroyed during construction, which the EIR identifies as a significant impact. Implementation of Mitigation Measures 5.13.1a and 5.13.1b (Fugitive Dust and Exhaust Emissions Measures), 5.9.2a (Dust Mitigation Plan and Comprehensive Air Monitoring Plan), and 5.4.3 (Compensation Measures) would reduce this potential impact to a less-than-significant level.

O-CNPS2-11 The comment asks whether instability or erosion levels of Observation Hill and Hill 1000, which would be excavated for a new spillway, would be exacerbated during storm events.

As stated on EIR page 3-35 (Vol. 1, Chapter 3, Section 3.5.1.2), Observation Hill would be excavated into a series of benches and would have an overall slope of 1.3:1 (i.e., 1.3 horizontal to 1 vertical)." EIR page 3-41 (Vol. 1, Chapter 3, Section 3.5.1.4) describes the proposed excavation for the new spillway, stating that "the slopes at the northern and southern ends of the spillway excavation area, which are both excavated in rock, would be graded into a series of benches and stabilized with shotcrete and bolting."

Impacts of excavation and other construction activities on soils with severe erosion and slope instability hazards are examined on EIR pages 4.8-24 – 4.8-25 (Vol. 2, Chapter 4, Section 4.8, Impact 4.8.2). The impact conclusion states that "implementation of the soil erosion protection measures discussed in Section 4.7, Water Quality, and described in detail in Mitigation Measure 5.7.1, Stormwater Pollution Prevention Plan, during construction and development and implementation of post-construction soil stabilization and revegetation plans, would reduce this impact to a less-than-significant level."

O-CNPS2-12 The commenter asks if flight paths of migratory birds would be affected by alteration of Observation Hill and Hill 1000, and asks if changes in landscape would affect eagles, waterfowl and butterflies.

Bird migration occurs at the landscape scale, using a variety of environmental cues including geomagnetism, and position of the sun and the moon, in addition to topographical features. Localized modification of the terrain at Observation Hill and Hill 1000 is therefore not expected to affect flight paths of migratory birds. Observation Hill and Hill 1000 do not provide habitat for waterfowl. Impacts of the CDRP on bald eagle are discussed in Impact 4.4.6 (Vol. 1, Chapter 4, Section 4.4.2.3, on EIR pages 4.4-100 – 4.4-102). Impacts on callippe silverspot butterfly are discussed in Impact 4.4.5 (Vol. 1, Chapter 4, Section 4.4.2.3 on EIR pages 4.4-98 – 4.4-99). Impacts on raptors and migratory birds are presented in Impacts 4.4.9b and c (Vol. 1, Chapter 4, Section 4.4.2.3 on EIR pages 4.4-108 – 4.4-112). Impacts on special status species are addressed under Impacts 4.4.10 on EIR page 4.4.113. Mitigation for these impacts is discussed in Mitigation Measure 5.4.1a, Pre-Construction Measures (Vol. 2, Chapter 5, Section 5.4, on EIR pages 5-2 – 5-6), and Mitigation Measure 5.4.3 Compensation Measures (Vol. 2, Chapter 5, Section 5.4, on EIR pages 5-10 –5-13).

See also Response I-Lucas1-01 which also addresses effects on migratory waterfowl.

O-CNPS2-13 The comment asks whether there are alternatives to excavating Observation Hill and Hill 1000, where the proposed spillway would be located.

As stated on EIR page 3-33 (Vol. 1, Chapter 3, Section 3.5.1.1), "The new dam would be constructed at the downstream toe of the existing dam (see Figure 3.7). The existing dam would function as a cofferdam during construction of the replacement dam and would also provide 100-year storm flood protection during construction while allowing the reservoir to remain at its current operating level." Alternatives to excavating Observation Hill and Hill 1000 would involve relocating the proposed replacement dam and spillway. Alternative 6, to construct a replacement dam at the location of the existing dam, would use the existing spillway and would not require excavation at Observation Hill and Hill 1000, as described on EIR page 7-8 and 7-64 – 7-72 (Vol. 2, Chapter 7, Table 7-1 and Section 7.8). Relocating the proposed dam and spillway to the existing dam and spillway site that would preserve Observation Hill and Hill 1000, as in Alternative 6, would remove the opportunity to use the existing dam as a cofferdam during construction. Excavation of Observation Hill and Hill 1000 would provide material for construction of the earthfill dam in the proposed project; Borrow Area B would need to be expanded to provide materials to construct the dam in the alternative location (see EIR page 7-65; Vol. 2, Chapter 7, Section 7.8.1). With the expansion of Borrow Area B, the visual impact identified as significant and unavoidable for the proposed project would be shifted to another location, and although reduced, would remain significant and unavoidable (see EIR pages 7-16 and 7-70; Vol. 2, Chapter 7, Table 7.2 and Section 7.8.3). Other impacts of this alternative would be similar or would increase compared to the proposed project, as summarized in Table 7.2 on EIR pages 7-9 – 7-20 or compared to the CDRP Variant described in Chapter 9. For example, Alternative 6 would require a substantial reduction in reservoir water levels, resulting in greater impacts on resident trout than would occur with the Draft EIR project or the CDRP Variant.

O-CNPS2-14 The comment states that the CDRP has significant and unmitigated impacts to the vegetation and special status plants found within the survey envelope. The comment asserts that Appendix C-2 uses a different classification system from the EIR, which makes it difficult to understand the habitat impact acreages.

Some of the difficulty may be a result of trying to understand impacts by comparing a table of habitats present in the study area to a summary of habitat types identified potential mitigation areas (EIR Vol. 3, Appendix C-2). Impacts on natural communities and special status plants are presented in the EIR page 4.4-76; Table 4.4.15, page 4.4-112; and Table 4.4.16, page 4.4-114 (Vol. 1, Chapter 4, Section 4.4). Mitigation for impacts to these resources is presented in the EIR pages 5-2 –5-16 (Vol. 2, Chapter 5, Section 5.4). CEQA requires that mitigation minimize significant environmental effects but does not require that impacts be eliminated. The mitigation measures identified in Section 5.4 reduce impacts on natural communities and special status plants to less-than-significant levels.

Vegetation community terminology used in EIR Appendix C.2 is consistent with the terminology used in EIR Table 4.4.1, page 4.4-8; EIR Table 4.4.15, page 4.4-112; and EIR Table 4.4.16, page 4.4-114 (Vol. 1, Chapter 4, Section 4.4). Natural communities are described separately and are aggregated into habitats. Both community and habitat names are used in EIR Appendix C.2. Two appendices related to mitigation have been added to the EIR: Appendix C.3 is an update to Appendix C.2, and Appendix C.4 provides a description of the Koopmann Road Mitigation Area.

O-CNPS2-15 The comment states that Figure 4.4.2 illustrates potential impacts on riparian forest habitat downstream of the Sunol Valley Water Treatment Plant (SVWTP); however, this impact was not clearly called out in the Draft EIR. The comment also states that impacts from inundation of this area are not being taken seriously and requests that the project and its impact areas be overlaid onto Figure 4.4.2 to show impact location with relation to the entire study area.

The CDRP would only re-inundate areas upstream of (i.e., generally south of) Calaveras Dam, and would not inundate any riparian habitat downstream of the Sunol Valley Water Treatment Plant. Impacts on riparian and other sensitive communities, including the locations of the impacts, are described in the EIR in Impact 4.4.11: Effect of CDRP on sensitive vegetation communities are discussed on EIR page 4.4-113 (Vol. 1, Chapter 4, Section 4.4). Impacts from the project footprint and the restored reservoir elevation (i.e., the area that would be re-inundated) are shown in the EIR on Figure 3.8, Work Limit Area, page 3-34 (Vol. 1, Chapter 3).

O-CNPS2-16 The comment states that riparian habitats and wetland complexes that would be inundated or filled completely would alter water resources of the watershed should be mitigated aggressively. It points to a principle of the science of landscape ecology, that the geographic distribution of habitats may be just as important as the size and quality of habitat.

The impacts on wetlands and riparian habitat would occur within the project footprint and in the pre-DSOD maximum inundation level for Calaveras Reservoir. The construction footprint is about 343 acres, and re-filling the reservoir would affect about 444 acres (see EIR page 4.4-76); these acreages overlap, so the maximum impacted area would not exceed 787 acres, or 1.2 square miles, as stated on EIR page 3.33 compared to the size of the southern Alameda Creek watershed (approximately 201 square miles), as stated on EIR page 4.3-1 (Vol. 1, Chapter 4, Section 4.3.2.2), the affected area is relatively small. As stated in Mitigation Measure 5.4.3a on page 5-10 (Vol. 2, Chapter 5, Section 5.4), wetland habitat and riparian habitat would be enhanced and established at the South Calaveras, Koopmann Road, Sage Canyon, and San Antonio Mitigation Areas prior to operation of the project. It is anticipated that at the end of the monitoring period (5 years for wetlands and willow riparian, and 10 years for other riparian), the compensatory mitigation habitat would be sufficiently established to fully compensate for habitat loss. Mitigation Measure 5.4.3b on page 5-12 (Vol. 2, Chapter 5, Section 5.4) requires final compensation plan(s) to include a description of the factors considered during the final mitigation site selection process, including consideration of watershed needs, on-site alternatives, and the practicability of accomplishing ecologically self-sustaining habitats at the mitigation sites.

Mitigation measure 5.4.3a is expected to accomplish the intended compensation because the preponderance of wetland mitigation sites would be in the same watershed or watersheds adjacent to where the impacts would occur, and accessible to the same species of plants and animals displaced as the reservoir reaches its new operating elevation. The proximity of impacted sites to area where the replacement functions would be developed, and the continuity of land management, provides additional reassurance that the sites would be successful and would replace habitat functions lost as a result of the impact.

O-CNPS2-17 The comment expresses concern regarding designation of an existing wetland area at the northwest arm of the reservoir as a spoils disposal area and questions whether the CDFG and the USACE have been notified. The comment also questions the availability of equivalent wetlands for mitigation and the mitigation ratio.

Refer to Response I-Lucas1-02 regarding impacts on wetlands at the northwest arm of the reservoir. About 7.3 acres of the 39-acre disposal site would be located below the normal maximum water surface elevation when the reservoir is refilled following construction of the new dam. Following construction, the final grade of the site would be configured to allow revegetation and would include a recontoured channel at the west side of the fill. When the reservoir level is restored, the shoreline within the inlet at this site would be restored (replanted) and managed to encourage the re-establishment of riparian vegetation and transitional vegetation between riparian and upland areas. Nevertheless, EIR Impact 4.4.1 concludes that the permanent loss of freshwater marsh and seep wetland would be a significant impact (see EIR page 4.4-76 in

Vol. 1, Chapter 4, Section 4.4). Implementation of Mitigation Measures 5.4.1 (Avoidance and Minimization Measures), 5.7.1 (Stormwater Pollution Prevention Plan), 5.4.2 (Habitat Restoration Measures), and 5.4.3 (Compensation Measures) as described in detail in Vol. 2, Chapter 5, would reduce this impact to less than significant.

The SFPUC has been conducting ongoing coordination with an interagency task force, including representatives of CDFG, RWQCB, and USACE, as part of the CDRP project development and design process (see Response O-CNPS2-07, above). These discussions have included presentations on the proposed project as well as recommended avoidance and mitigation measures. Both the CDFG and USACE received copies of the Draft EIR during the public review period. The CDFG submitted comments on the Draft EIR, and responses to CDFG's comments are in Responses A-CDFG-01 to A-CDFG-36. In addition to CEQA, the proposed project would be subject to additional compliance and/or permitting requirements under state and federal regulations. Agency approvals required for the project are discussed on EIR pages 1-26 – 1-27 and 3-71 – 3-74 (Vol. 1, Chapter 1, Section 1.4.5.3, and Chapter 3, Section 3.7.3). Please also refer to Response I-Atkinson-02 for a discussion of agency coordination and mitigation measures.

Please see Responses O-CNPS1-02 and O-CNPS1-04 regarding impacts on wetlands and wetlands mitigation and Responses A-ACPWA-14 and A-ACPWA-36 regarding appropriate selection of mitigation sites. Also see Response A-ACPWA-01 and Responses O-ACA&CBD1-64 and O-CNPS1-06 regarding mitigation ratios.

O-CNPS2-18 The comment states that seasonal wetlands will be lost when the reservoir returns to elevation 756 feet and asks where mitigation areas for this type of wetland can be found. The comment further states that inundation of Calaveras Creek should be mitigated for in linear feet of wetlands, hopefully where continuity of the wildlife corridor is available, in the south end of Calaveras Reservoir near the Calaveras Test Site, and at the north end of the reservoir.

Impacts on wetlands and riparian habitat are discussed in Impact 4.4.1 on EIR pages 4.4-75 – 4.4-84 (Vol. 1, Chapter 4, Section 4.4). Compensation for wetlands and other waters, including linear feet of stream habitat, and riparian habitat is presented in Mitigation Measure 5.4.3 on EIR pages 5-10 – 5-14 (Vol. 2, Chapter 5, Section 5.4). See also Response O-CNPS2-17, above, concerning wetlands mitigation areas.

Regarding the Calaveras Test Site at the south end of Calaveras Reservoir, as noted in Impact 4.9.8 on EIR page 4.9-30 (Vol. 1, Chapter 4, Section 4.9), restoration of water levels to pre-DSOD restricted levels would not inundate the former test site. The proposed South Calaveras Mitigation Area has been modified (see Appendix C.3) and no longer includes areas near the Calaveras Test Site.

O-CNPS2-19 The comment requests that "more comprehensive" plant surveys conducted in the past be discussed.

The San Francisco Planning Department considers the plant surveys conducted for the EIR to be sufficient for CEQA purposes. A botanical survey was conducted in support of the CDRP EIR in 2006 and documented in the *Calaveras Dam Replacement Project Botanical Survey Technical Report* by May and Associates on behalf of the EDAW & Turnstone Joint Venture (ETJV 2006a, referenced on EIR page 4.4-119, Vol.1, Chapter 4, Section 4.4). The technical report used industry standards (CDFG's 2000 *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*) for identifying species that potentially could occur in the study area. The results of the surveys are summarized on EIR pages 4.4-7 – 4.4-18 and 4.4-21 – 4.4-22. Additional survey reports covering botanical resources at the ACDD Bypass Facility and proposed mitigation areas are noted on EIR pages 4.4-118 – 4.4-124. These technical reports are on file and available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, California.

O-CNPS2-20 The comment states the opinion that impacts on sensitive vegetation communities are significant, and expresses the belief that mitigation areas on SFPUC-owned lands are low priority for mitigation given that they are already owned by the SFPUC, are not open to the public, and are subject to SFPUC land management goals and standards, and fail to meet CEQA standards, citing CEQA Guidelines § 15041(b).

The CEQA Guidelines section (15041 (b)) cited in the comment does not relate to mitigation. It states: "When a public agency acts as a Responsible Agency for a project, the agency shall have more limited authority than a Lead Agency. The Responsible Agency may require changes in a project to lessen or avoid only the effects, either direct or indirect, of that part of the project which the agency will be called on to carry out or approve."

Impacts on sensitive vegetation communities are described as significant in the EIR on page 4.4-116 (Vol. 1, Chapter 4, Impact 4.4.11 Conclusions). Mitigation Measure 5.4.3 on EIR page 5-13 (Vol. 2, Chapter 5, Section 5.4) describes site selection criteria, including on-site alternatives, legal arrangements and instruments to ensure the long-term protection of the sites, and long-term financing mechanisms for management. The mitigation measures identified in the EIR meet the requirement to reduce impacts to less-than-significant levels; there is no requirement that mitigation measures be carried out on property owned by another party. The mitigation areas identified in the EIR would be enhanced by the mitigation programs, compared to existing conditions. Refer also to Response O-ACA&CBD1-62 for further discussion regarding use of SFPUC-owned lands for mitigation.

O-CNPS2-21 The comment requests a detailed history of how each mitigation site was acquired and what funding was used for acquisition in order to understand how and why these properties were acquired and how they may or may not meet mitigation guidelines.

The requested information is not relevant to an evaluation of the adequacy of the EIR. SFPUC owns the proposed mitigation lands in fee title, the lands are not encumbered by deed restrictions, and there is nothing to preclude their use as compensatory mitigation. All of the proposed compensatory mitigation areas would be preserved in perpetuity by a dedicated conservation easement. An entity approved to hold conservation easements (e.g., the Alameda County Resource Conservation District) would hold the conservation easement for the properties. This entity would be responsible for ensuring that grazing regimens, non-native invasive species and rodent controls, and any other long-term management requirements identified in the Compensation Plan are implemented correctly and in perpetuity.

See Responses O-CNPS2-16, A-EBRPD-12, A-ACPWA-01, and O-ACA-06 for a description of how the proposed mitigation sites were identified and how mitigation meets mitigation guidelines, and Appendices C.3 and C.4 for an update to Appendix C.2 and a description of the Koopmann Road Mitigation Area, respectively.

O-CNPS2-22 The comment notes that Appendix C-2 of the Draft EIR is missing photographs of the four mitigation sites. See Response A-EBRPD-20 for a discussion of this issue and presentation of missing photos.

O-CNPS2-23 The comment requests clarification of Mitigation Measure 5.4.1b for vegetation removal presented on page 1-45, and how it mitigates for loss of habitat.

The referenced page is in the EIR Summary Chapter. The purpose of the Mitigation Measure 5.4.1b (EIR pages 5-7 – 5-9, Vol. 2, Chapter 5, Section 5.4) is to protect wetlands and other waters from inadvertent fill during construction. A more detailed description of compensation for impacts on wetlands and riparian habitat is described in Mitigation Measure 5.4.3 on EIR pages 5-10 – 5-14. Please also refer to Response A-RWQCB-15 regarding clarification of compensation for impacts and associated text revisions to this mitigation measure.

O-CNPS2-24 The comment expresses the desire to collect seeds or salvage special status plants that would be affected by the CDRP.

This comment is acknowledged. The commenter is encouraged to contact the San Francisco Public Utilities Commission's Land and Natural Resources Division at phone number (415) 554-3265, fax number (415) 934-5770, or to contact the San Francisco Public Utilities Commission's Land and Natural Resources Division through the "Contact Us" link on the SFPUC's web page (http://sfwater.org) to make arrangements to obtain access to the Calaveras Reservoir watershed. In addition, an SFPUC staff contact person has been identified and the SFPUC will contact the California Native Plant Society. See also Response O-CNPS1-10 regarding the Alameda Watershed Management Plan policy that encourages and allows the investigations of special status plants and communities on the SFPUC Alameda watershed lands.

O-CNPS2-25 The comment expresses the opinion that preventative measures should be taken to relocate sensitive species before construction. The comment observes that the U.S. Navy saved western pond turtles at Moffett Field using this strategy.

As described in the EIR (Impact 4.4.10 on page 4.4-113 of Vol. 1, Chapter 4.4, Section 4.4.2.3), the CDRP is not expected to directly impact sensitive plant populations, and therefore none would require relocation. Mitigation Measure 5.4.1a on EIR pages 5 -2 – 5-7 (Vol. 2, Chapter 5, Section 5.4) describes pre-construction measures to avoid impacts on sensitive species, which include relocation efforts for California red-legged frog, California tiger salamander, foothill yellow-legged frog, western pond turtle, burrowing owl, and northern harrier. Measures include having a qualified biologist conduct pre-construction surveys in suitable habitat, and if sensitive species are found, contacting the USFWS and/or CDFG to determine whether relocating individuals is appropriate.

O-CNPS2-26 The comment states that the Draft EIR fails to present the information required by CEQA: information on soils is missing, impacts on vegetation are difficult to understand, and mitigations are not specific enough to determine if they are adequate. The comment also encourages the SFPUC to consider presenting information on alternative strategies and alternative mitigation sites that are not currently owned by the SFPUC.

This comment is a summary of the conclusions in earlier comments. Please refer to Responses O-CNPS2-01, O-CNPS2-09, O-CNPS2-10, O-CNPS2-15, O-CNPS2-16, O-CNPS2-20, and A-EBRPD-12.

References

EDAW & Turnstone Joint Venture (ETJV). 2006a. Calaveras Dam Replacement Project Botanical Survey Technical Report. Prepared by May and Associates for San Francisco Public Utilities Commission and EDAW/Turnstone Joint Venture. November 10, 2006.

11.2.15 CLEAN WATER ACTION, JENNIFER CLARY, 11/12/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR project and the CDRP Variant.

O-CWA-01 The comment expresses concern about the impact of the SFPUC's Water System Improvement Program (WSIP) on flow volumes in the Tuolumne River, because adequate studies have not been done and mitigation is inadequate.

The impact of the WSIP on the Tuolumne River was analyzed in the WSIP Program EIR (PEIR), which was certified by the San Francisco Planning Commission in October 2008 in compliance with CEQA. The PEIR determined that impacts of the WSIP on the Tuolumne River and associated resources were either less than significant or could be mitigated to a less-than-significant level with implementation of measures identified in the document. Because the Calaveras Dam Replacement Project (CDRP) EIR tiers from the WSIP PEIR, it does not need to repeat the analysis presented in the PEIR. However, a summary of the WSIP water supply and systemwide operations strategy impacts and mitigation measures is presented in the CDR P EIR on pages 4-5 – 4-31 (Vol. 1, Chapter 4, Section 4.1.3.3).

11.2.16 EAST BAY BICYCLE COALITION, ROBERT RABURN, EXECUTIVE DIRECTOR, 11/10/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-EBBC-01 The comment raises concerns regarding maintenance of clean roadway conditions for bicyclists.

As indicated on EIR page 4.12-16 (Vol. 1, Chapter 4, Section 4.12, Impact 4.12.4), the closed portion of Calaveras Road would be swept clean on either Friday evening or Saturday morning, and re-opened for traffic on Saturday and Sunday. Mitigation Measure 5.12.4a, Traffic Control Plan, on EIR pages 5-37 – 5-38 (Vol. 2, Chapter 5, Section 5.12) includes a measure that requires maintenance of adequate driving and bicycling conditions on Calaveras Road during the construction period. Details related to roadway maintenance would be worked out as part of agreements between the SFPUC and Alameda and Santa Clara Counties, and, if applicable, the City of Milpitas.

O-EBBC-02 The comment requests consideration to accommodate the AMGEN bicycle tour in the spring of 2012 and the annual Primavera ride conducted by the Fremont Freewheelers Bicycle Club.

The AMGEN and Primavera bicycling tours are discussed on EIR page 4.3-7 (Vol. 1, Chapter 4, Section 4.3.1.5). To address potential impacts on the AMGEN Tour, Mitigation Measure 5.3.6 on EIR page 5-1 (Vol. 2, Chapter 5, Section 5.3) states that the SFPUC will coordinate with the organizers of the AMGEN tour to ensure that temporary road closures, haul truck traffic, and other construction-related activities would not interfere with the tour. To address similar concerns for the Primavera bicycle tour, Mitigation Measure 5.3.6 is revised as follows (deletions are shown in ~~strike through~~ and new text is underlined):

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[1] Comment provided at the public hearing held at Fremont Main Library, November 10, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 31 – 33.

> **5.3.6 AMGEN and Primavera Bicycling Tours ~~of California~~**
>
> The San Francisco Public Utilities Commission (SFPUC) shall coordinate with the organizers of the AMGEN Tour of California bicycle tour and the Fremont Freewheelers Bicycle Club Primavera bicycle tour to ensure that temporary road closures, haul truck traffic, and other activities related to project construction will not interfere with these tours. Construction activities may be temporarily suspended as needed to prevent conflicts with the AMGEN and Primavera bicycle tours.

Refer also to Response O-FFBC1-02 for a discussion of potential construction-related effects on the AMGEN and Primavera bicycle tours.

O-EBBC-03 The comment notes that closure of Calaveras Road for a total of 20 months is a long period of time for access to be unavailable.

As discussed on EIR page 4.3-22, closure of Calaveras Road would occur on weekdays only, and would be limited to the portion of Calaveras Road between Geary Road and Felter Road for a 2-month period in summer 2011 and for an 18-month period starting in winter 2012. Closure on this segment of Calaveras Road is proposed during these periods in order to increase traffic safety by reducing the potential for conflicts with autos and bicyclists when off-site truck hauling to the dam site would occur. Weekday access would be available on Calaveras Road north of Geary Road.

As stated on EIR page 4.12-16, throughout the 20-month period, Calaveras Road would be swept clean either on Friday evening or Saturday morning, and reopened for vehicular and bicycle traffic on weekends (i.e., Saturday and Sunday) and all major holidays, typically the peak activity periods for bicyclists on Calaveras Road, who are mostly recreational bicyclists.

O-EBBC-04 The comment states that the Sunol Regional Wilderness would be closed for about 2 years. The comment is incorrect. The Sunol Regional Wilderness would not be closed as a result of the proposed project. Sunol Regional Wilderness would remain open and access would be provided to this area year-round from Calaveras Road north of Geary Road throughout the 4-year construction period. Calaveras Road from the south, between Geary Road and Felter Road, would be closed on weekdays during a 2-month period in summer 2011 and an 18-month period starting in winter 2012, for a total of 20 months, but would remain open on weekends and all major holidays on this segment of Calaveras Road; refer to Response O-EBBC-3, above, and Response

A-ACPWA-17 for further discussion of the proposed closure of Calaveras Road.

O-EBBC-05 The comment indicates that the mitigation measures included in the Draft EIR are inadequate to address closures, and requests that full consideration be given to increase public access in the project area.

As noted in Response O-EBBC-04, above, only the portion of Calaveras Road between Geary Road and Felter Road would be closed on weekdays for a total of 20 months during project construction.. As discussed in Response O-EBBC-4, above, there is no planned closure of Sunol Regional Wilderness, and weekday access to Sunol Regional Wilderness would continue to be provided from Calaveras Road, north of Geary Road. Calaveras Road would be fully accessible on weekends and all major holidays, which are peak periods for recreational bicyclists.

EIR mitigation measures include implementation of a Traffic Control Plan (Mitigation Measure 5.12.4a on EIR pages 5.37 – 5.38) to address the proposed closure of Calaveras Road between Geary Road and Felter Road. The Traffic Control Plan would include provisions to install signs warning motorists, bicyclists, and pedestrians of the construction zone; to develop a program to notify potential users, including bicyclists and pedestrians, of scheduled roadway closures and alternate bicycle routes; and to maintain adequate driving and bicycling conditions on Calaveras Road during construction. With implementation of Mitigation Measure 5.12.4a, proposed impacts related to the temporary closure of Calaveras Road would be reduced to a less-than-significant level, and the proposed mitigation would be considered adequate under the CEQA Guidelines (Section 15126.4(a)) to address impacts related to the temporary closure of Calaveras Road.

Although public access on Calaveras Road would be limited for a total of approximately 20 months during project construction, at no time would public access to the Sunol Regional Wilderness be closed as a result of the proposed project. Therefore, increased public access in the project area is not required as part of the proposed CDRP.

O-EBBC-06 The commenter recommends bridging Alameda Creek near I-680 to provide pedestrian and bicycle access as mitigation to increase public access to Andrade Road, Sheridan Road, and Vargas Plateau.

While a bridge across Alameda Creek could increase public access for bicyclists and pedestrians, this proposal does not address access impacts related to the temporary closure of Calaveras Road on weekdays. As discussed above, access to Calaveras Road and the Sunol Regional Wilderness would be available on weekdays, north of Geary Road, and would be fully accessible on weekends and all major holidays. Therefore, construction of the suggested pedestrian and bicycle bridge would not mitigate an impact of the proposed project and is not required under CEQA.

11.2.17 FREMONT FREEWHEELERS BICYCLE CLUB, JAN GREEN, THE PRIMAVERA ORGANIZING COMMITTEE, 12/11/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-FFBC1-01 The comment expresses concerns regarding effects of the CDRP construction on bicycle safety, and notes that construction work affecting the closure of Calaveras Road will be conducted for 2 months in 2011 and 18 months in 2012 and 2013.

Bicycle safety is addressed on EIR page 4.3-22 (Vol. 1, Chapter 4, Section 4.3.2.5), and on EIR pages 4.12-15 – 4.12-16 (Vol. 2, Chapter 4, Section 4.12, Impact 4.12.4). As discussed in these sections, construction-related traffic on Calaveras Road would be mitigated to a less-than-significant level with implementation of a Traffic Control Plan in accordance with Mitigation Measure 5.12.4a and temporary closure of a portion of Calaveras Road under Mitigation Measure 5.12.4b. Please refer also to Response O-EBBC-01 and Response O-EBBC-05, which describe bicycle safety measures included in Mitigation Measure 5.12.4a.

The comment refers to the weekday closure of the southern portion of Calaveras Road between Geary Road and Felter Road for a 2-month period in summer 2011 and for an 18-month period starting in winter 2012. Refer to Response O-EBBC-04 and Response A-ACPWA-11 for a discussion of temporary closure of the southern portion of Calaveras Road during these periods of project construction.

O-FFBC1-02 The comment requests that the Primavera bicycling tour be afforded the same accommodations as the AMGEN tour, and that, to eliminate safety hazards for cyclists, roadway conditions, with proper asphalt patches and sweeping, be a priority before roadways are reopened on weekends.

The Primavera and AMGEN bicycling tours are discussed on EIR page 4.3-7 (Vol. 1, Chapter 4, Section 4.3.1.5). Please refer to Response O-EBBC-02, which addresses the request that the FFBC Primavera bicycling tour and revises Mitigation Measure 5.3.6 on EIR page 5.1 (Vol. 2, Chapter 5, Section 5.12) to include the Primavera bicycling tour. This response states that the SFPUC will coordinate with the organizers of the AMGEN and Primavera bicycling tours to ensure that temporary road closures, haul truck traffic, and other construction-related activities would not interfere with these tours.

As indicated on EIR page 4.12-16 (Vol. 2, Chapter 4, Section 4.12, Impact 4.12.4), the closed portion of Calaveras Road would be swept clean on either Friday evening or Saturday morning, and re-opened for traffic on Saturday and Sunday. Mitigation Measure 5.12.4a, Traffic Control Plan, includes a provision for maintenance of adequate driving and bicycling conditions on Calaveras Road during the construction period. Details related to roadway maintenance would be worked out as part of agreements between the SFPUC and Alameda and Santa Clara Counties. Please refer also to Response O-EBBC-01 and Response O-EBBC-03 for additional discussion of roadway maintenance and bicycle safety.

11.2.18 FREMONT FREEWHEELERS BICYCLE CLUB, GARY SMITH AND JAN GREEN, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-FFBC2-01 The comment expresses appreciation for keeping Calaveras Road open to cyclists on weekends and for informing the cycling community about the project. The comment also asks that attention be paid to road conditions before weekend opening, including pothole repair, and that the road is well swept to eliminate safety hazards for cyclists.

Please see Response O-FFBC1-01, second paragraph, which fully responds to this comment.

O-FFBC2-02 The comment notes the annual bicycle touring event in April and asks that Calaveras Road be in good condition and clean during this event. The comment is referring to the annual Primavera bicycling tour conducted by the Fremont Freewheelers Bicycle Club.

Please see Response O-FFBC1-02, which addresses this request. Mitigation Measure 5.3.6 is revised in that response to include the Primavera bicycling tour and to state that the SFPUC will coordinate with the organizers of the Primavera bicycling tour to ensure that temporary road closures, haul truck traffic, and other construction-related activities would not interfere with those tours.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 32 – 33.

11.2.19 FREMONT FREEWHEELERS BICYCLE CLUB, JAN GREEN, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR project and the CDRP Variant.

O-FFBC3-01 The commenter identified gravel and sand as detrimental to bicycle travel and safety, and requested that roads used by large trucks carrying gravel and sand be kept clean.

Mitigation Measure 5.12.4a, Traffic Control Plan, on EIR pages 5-37 – 5-38 (Vol. 2, Chapter 5, Section 5.12) includes a measure that requires maintenance of adequate driving and bicycling conditions on Calaveras Road during the construction period. Details related to roadway maintenance would be worked out as part of agreements between the SFPUC and Alameda and Santa Clara Counties and the City of Milpitas, as applicable. See also Responses O-EBBC-01, O-EBBC-05, and O-FFBC1-01.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, page 33.

11.2.20 GRIZZLY PEAK FLY FISHERS, JIM SCHRRER, CONSERVATION CHAIR, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR project and the CDRP Variant.

O-GPFF-01 The comment voices support for the Alameda Creek Alliance and the work that they have done to restore fish migration potential in Alameda Creek. The comment also urges the SFPUC to do all that it can to accommodate fish passage for salmon and steelhead migration. The portion of the comment that supports rebuilding Calaveras Dam is acknowledged.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for information on the flow schedules proposed as part of the CDRP, Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, regarding fish passage, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding the SFPUC's Water Enterprise Environmental Stewardship Policy and SFPUC involvement with the Alameda Creek Fisheries Restoration Workgroup, cumulative impacts on steelhead, and information on monitoring and adaptive management proposed by the SFPUC for steelhead. Please also refer to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, regarding the presence of salmon within Alameda Creek and the potential impacts that were evaluated in the EIR. .

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, page 35.

11.2.21 GOLDEN WEST WOMEN FLYFISHERS, CINDY CHARLES, PRESIDENT & CONSERVATION CHAIR, 11/11/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-GWWF1-01 The comment expresses support for the goal of upgrading SFPUC water supply infrastructure, but states that the system must be managed in a way that is compatible with restoration of native fish and wildlife downstream of the dam (presumably the Calaveras Dam) and must include adequate stream flow releases for migratory fish below the reservoir. The comment also contends that the proposed mitigations for construction impacts on habitat for endangered species are limited and weak. The comment states that the water supply system should be managed in accordance with the SFPUC's watershed stewardship policy.

The comment provides no details or evidence regarding critiques of the mitigation for construction impacts; therefore, no specific response on this item is possible. However, responses to other detailed comments regarding mitigation for construction impacts may address this commenter's concerns. Please see Response O-ACA1-06. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for responses to comments regarding construction-related effects on aquatic habitats.

Regarding other issues presented in the comment, please refer to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, of the master response for information regarding the flow schedule included in project implementation; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the adequacy of the proposed instream flow schedules for native fish; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the SFPUC's Environmental Stewardship

Policy, the proposed flow schedules, and the interaction between the proposed flow schedules and steelhead.

O-GWWF1-02 The comment expresses concern that fish passage will not be provided at the Alameda Creek Diversion Dam (ACDD) or Calaveras Dam and states that San Francisco should fulfill its responsibility of good stewardship of steelhead by incorporating meaningful actions to protect and restore these fish in its plans and projects. The comment also asserts that the lack of fish passage as an element of the project as described in the Draft EIR is an oversight of the EIR.

As indicated in the analysis of fisheries impacts in the EIR (Vol. 1, Chapter 4, Section 4.5, pages 4.5-54 through 4.5-82), provision of fish passage is not required as a component of the CDRP to reduce all fisheries related impacts to a less-than-significant level. In addition, since publication of the Draft EIR, the SFPUC has developed a CDRP project variant that includes installation of a fish ladder at the ACDD to provide passage for fish upstream and downstream of this facility, as well as a fish screen at the upstream end of the diversion tunnel at the ACDD. Please refer to Chapter 9 for more information on the CDRP Variant and an analysis of its environmental effects.

Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for further information regarding fish passage at the ACDD and Calaveras Dam and for revisions to the EIR regarding fish passage commitments. Please also refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the SFPUC's Environmental Stewardship Policy and the proposed flow schedule and steelhead.

11.2.22 GOLDEN WEST WOMEN FLYFISHERS, CINDY CHARLES, PRESIDENT & CONSERVATION CHAIR, 12/14/09[1]

O-GWWF2-01 The comment, which supports rebuilding the dam, is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-GWWF2-02 The comment expresses concern regarding the adequacy of proposed flows for anadromous fish to support the migratory return of steelhead.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for information regarding the flow schedules included in project implementation; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the adequacy of the proposed instream flow schedules for native fish; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the proposed flow schedule and steelhead.

In addition, as discussed in Chapter 9 of this Comments and Responses document, since publication of the Draft EIR, the SFPUC has developed a variant to the CDRP. The CDRP Variant includes installation of a fish screen at the upstream end of the diversion tunnel at the Alameda Creek Diversion Dam (ACDD), installation of a fish ladder at the ACDD to provide passage for fish upstream and downstream of the ACDD, and implementation of revised flow schedules developed through coordination with the National Marine Fisheries Service and the California Department of Fish and Game. Refer to Chapter 9 for more information on these items.

O-GWWF2-03 The comment states that the Golden West Women Flyfishers (GWWF) has been working with the SFPUC to identify ownership of an existing potential fish passage barrier, a weir at a U.S. Geological Survey (USGS) gaging station, and on possible removal of the gaging weir to enhance fish passage. The comment also expresses the desire that the SFPUC provide adequate flows for migratory fish.

The SFPUC intends to continue working with GWWF and other entities regarding the referenced USGS gaging station. Regarding flows in Alameda

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[1] Comments provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 21 - 23.

Creek for migratory fish, please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for information regarding the flow schedules included in project implementation; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the adequacy of the proposed instream flow schedules for native fish; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the proposed flow schedule and steelhead.

11.2.23 LEAGUE OF WOMEN VOTERS OF THE BAY AREA, MARION TAYLOR, VICE PRESIDENT, PROGRAM AND ADVOCACY, 11/18/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-LWVBA-01 The comment supports the stewardship policy in the Water System Improvement Program (WSIP) emphasizing lessening impacts on all system water bodies, achieving environmental restoration, and increasing conservation and reclamation.

The comment is acknowledged. The environmental impacts of the WSIP were addressed in the Program EIR certified in 2008. The WSIP is described in the Calaveras Dam Replacement Project EIR on pages 2-2 – 2-8 (Vol. 1, Chapter 2, Section 2.2), and the WSIP Goals and Objectives are summarized in Table 2.1 on EIR page 2-6. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-LWVBA-02 The comment, expressing support for a new Calaveras Dam as a major improvement in terms of seismic safety, is acknowledged. Seismic safety goals of the proposed project are described on EIR pages 3-8 to 3-9 (Vol. 1, Chapter 3, Section 3.2.2.3). The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-LWVBA-03 The comment asks that the project include release of sufficient flows to support steelhead according to the recommendations of the National Marine Fisheries Service and in compliance with the SFPUC's Environmental Stewardship Policies.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for information on the proposed flow schedules and potential effects to steelhead and the proposed monitoring and adaptive management strategy. Also see Response A-CDFG-10 for information regarding the proposed project's consistency with the SFPUC's Water Enterprise Environmental Stewardship Policy.

11.2.24 NORTHERN CALIFORNIA COUNCIL OF FEDERATION OF FLY FISHERS, ANNE-MARIE BAKKER, PRESIDENT, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR project and the CDRP Variant.

O-NCCFFF1-01 The comment states a desire that adequate flows be released from the CDRP to support both adult and juvenile anadromous fish and that flows represent a natural hydrograph.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the adequacy of the proposed instream flow schedules for native fish; Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for information regarding the flow schedule included in project implementation; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding effects of the proposed project on steelhead.

Regarding consistency of proposed flows with the natural hydrograph, the EIR (Vol. 1, pages 3-69 and 3-70, and Vol. 3, Appendix J) describes the proposed Draft EIR project flow schedules for steelhead, which provide varying minimum flows by season and water year type (e.g., wet, normal, and dry). This approach of providing varying minimum flows by season and water year type considered the natural variability of unimpaired flows in the watershed. Also see Response O-Acterra et al.-16.

In addition, since the Draft EIR was published the SFPUC has developed a project variant that includes enhancements to fishery resources and other refinements to the project analyzed in the Draft EIR. As described in Chapter 9, the CDRP Variant was developed as a result of the SFPUC's ongoing coordination with resource agencies and its own project development and design process. The CDRP Variant includes proposed instream flow schedules that differ from those included in the Draft EIR project. The CDRP Variant and its environmental impacts are described in Chapter 9, Section 9.2 and 9.3, of this Comments and Responses document. Please see Chapter 9 for further discussion of the CDRP Variant. The master responses in Chapter 10 on Hydrology (Section 10.3) and on Fisheries (Section 10.4) also discuss the CDRP Variant and its proposed instream flow schedules.

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[1] Comments provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, page 32.

11.2.25 NORTHERN CALIFORNIA COUNCIL OF FEDERATION OF FLY FISHERS, BOBBIE ARMOR, DIRECTOR AND CONSERVATION PENINSULA FLY FISHERS, 12/14/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-NCCFFF2-01 The comment expressing support for the dam is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-NCCFFF2-02 The comment asks that flow releases from the CDRP be adequate to support fish passage.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding the adequacy of the proposed flow schedule for native fish, including fish passage; Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for information regarding the flow schedules included in project implementation; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for responses to comments regarding the proposed instream flow schedules and steelhead and steelhead passage.

In addition, since the Draft EIR was published the SFPUC has developed a project variant that includes enhancements to fishery resources and other refinements to the project analyzed in the Draft EIR. The CDRP Variant was developed as a result of the SFPUC's ongoing coordination with resource agencies and its own project development and design process. The CDRP Variant includes proposed instream flow schedules that differ from those included in the Draft EIR project. The CDRP Variant and its environmental impacts are described in Chapter 9, Section 9.2 and 9.3, of this Comments and Responses document. Please see Chapter 9 for further discussion of the CDRP Variant. The master responses in Chapter 10 on Hydrology (Section 10.3) and on Fisheries (Section 10.4) also discuss the CDRP Variant and its proposed instream flow schedules.

11.2.26 NORTHERN CALIFORNIA DISTRICT COUNCIL OF LABORERS, ANTHONY DIMAS, 11/12/09[1]

O-NCDCL-01 The comment, which supports the Draft EIR and states that the project represents job opportunities, including job opportunities for disadvantaged neighborhoods, is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-NCDCL-02 The comment requests support for the project and asks that decision-makers move forward with it. The comment is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 28 – 29.

11.2.27 OPERATING ENGINEERS LOCAL 3, KEN EDGECOMBE, BUSINESS REPRESENTATIVE, 11/10/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-OpEngl-01 The comment states that the proposed project is fully funded and 1,300 out-of-work members of Local 3 are available to work on it. The comment is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-OpEngl-02 The comment, which expresses the opinion that since construction of the project will take 4 years, it should get started and the remaining issues should be settled during the construction period, is acknowledged. However, under the California Environmental Quality Act (CEQA), construction of the proposed project can occur only after certification of the Final EIR, and approval of the project, followed by the filing of a Notice of Determination by the City and County of San Francisco Planning Department to carry out or approve the project (*CEQA Guidelines*, Sections 15090 and 15097). The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

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[1] Comment provided at the public hearing held at Fremont Main Library, November 10, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 18 – 19.

11.2.28 OPERATING ENGINEERS UNION, CHARLIE LAVERY, 11/12/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR project and the CDRP Variant.

O-OpEng2-01 The comment supports the mitigation proposed as part of the project and expresses the belief that the project is an environmentally responsible way to supply water. The comment supports moving the environmental review process forward and allowing the permit process to proceed, and in so doing help the economic recovery. The comment is acknowledged. The comment does not address the adequacy or content of the EIR; therefore, no further response is required.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 21 – 22.

11.2.29 OPERATING ENGINEERS LOCAL 3, MIKE CROLL, BUSINESS REPRESENTATIVE, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

O-OpEng3-01 The comment, which states that the project would provide work for hundreds of people, is acknowledged.

The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-OpEng3-02 The comment, which states that the dam is old and needs to be promptly rebuilt, is acknowledged.

The proposed project includes constructing a new, replacement dam, as described in Chapter 3, Section 3.4, on EIR pages 3-23 – 3-32. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-OpEng3-03 The comment states that the SFPUC has two to four years to determine waters flows and the type of fish ladders that should be built, and urges the City to build the project before there is a potential disaster (e.g., a major seismic event).

As discussed on EIR page 3-71 (Vol. 1, Chapter 3, Section 3.7), following certification of the Final EIR, the SFPUC has indicated that it would approve the proposed project and any modifications; in this case, either the Draft EIR project or the CDRP Variant would be approved, as discussed in Chapter 9 of this Comments and Response document.

Potential geologic hazards that could affect the existing dam and reservoir prior to implementation of the proposed project are discussed in Section 4.8, Geology, Soils, and Seismicity (Vol. 2, EIR pages 4.8-1 to 4.8-22).

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 28 – 29.

11.2.30 SAN FRANCISCO BUILDING AND CONSTRUCTION TRADES COUNCIL, MICHAEL THERIAULT, 11/12/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

O-SFBCTC-01 The comment notes that, like the undergrounding of Islais Creek in San Francisco, Calaveras Dam has been part of San Francisco's infrastructure for a long time. The comment states that Calaveras Dam is an important component of San Francisco's water supply and expresses support for the proposed rebuild. The comment is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

O-SFBCTC-02 The comment states that, as the primary concern, the dam must store enough water to meet the city's needs in event of emergency, with releases for rainbow trout and steelhead if there is sufficient water.

See Response O-ACA&CBD1-01 regarding project objectives, and the master response in Section 10.4, Fisheries, specifically Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding flows releases for native fishes.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 25 – 26.

11.2.31 SAN FRANCISCO BUILDING OWNERS AND MANAGERS ASSOCIATION, KEN CLEAVELAND, DIRECTOR, GOVERNMENT AND PUBLIC AFFAIRS, 11/12/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

O-SFBOMA1-01 The comment notes that if the water supply from Hetch Hetchy is not available, sufficient reserve supplies are needed to keep the City functioning.

As explained on EIR page 3-7 (Vol. 1, Chapter 3, Section 3.2.2.1), when the supply from Hetch Hetchy is interrupted, water from Calaveras reservoir is used to meet customer demand. Re-establishing water delivery reliability is one of the primary project objectives (EIR page 3-6). The comment is acknowledged.

O-SFBOMA1-02 The comment, which notes that operations of the new dam will be influenced by permitting agencies and supports moving forward with the Draft EIR, is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

11.2.32 SAN FRANCISCO BUILDING OWNERS AND MANAGERS ASSOCIATION, KEN CLEAVELAND, DIRECTOR, GOVERNMENT AND PUBLIC AFFAIRS, 11/12/09[1]

O-SFBOMA2-01 The comment notes that the key issue is safety of the SFPUC water supply and that the EIR has addressed environmental issues and should be moved forward.

The comment is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 24 – 25.

11.2.33 SAN FRANCISCO CHAMBER OF COMMERCE, ROB BLACK, VICE PRESIDENT/PUBLIC POLICY, 11/12/09

O-SFCofC-01 The comment states that the members of the San Francisco Chamber of Commerce support the Calaveras Dam Replacement Project and the EIR, and asks that the environmental review and permitting processes for the new dam be allowed to move forward.

The comment is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.

11.2.34 SIERRA CLUB, SAN FRANCISCO BAY CHAPTER, JANIS TURNER, 12/14/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

O-SierraC-01 The comment, which expresses support for a timely rebuilding of Calaveras Dam, is acknowledged.

O-SierraC-02 The comment requests that the SFPUC comply with state and federal environmental laws and leave enough water in Alameda Creek so that steelhead and salmon can survive.

EIR pages 3-70 – 3-74 describe the approvals and permits required for implementation of the proposed project (Vol.1, Chapter 3, Section 3.7, Discretionary Approvals and Agencies Involved). Refer to the master response presented in Section 10.4, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; Section 10.4.6, Other Anadromous Fish Species in Alameda Creek; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for information regarding proposed flow schedules, requirements for steelhead, and compliance with the Fish and Game Code.

Additionally, the SFPUC has developed the CDRP Variant, which includes revised flow schedules, construction of a fish ladder at the ACDD, installation of fish screens at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an Adaptive Management Implementation Plan. These enhancements were developed in close coordination with the National Marine Fisheries Service and the California Department of Fish and Game. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-SierraC-03 The comment states that downstream flows in Alameda Creek should mimic natural flows.

Refer to Response O-Acterra et al.-16 for a response to this comment.

11.2.35 TUOLUMNE RIVER TRUST, JESSIE RAEDER, 11/10/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

O-TRT1-01 The comment raises concern over the flows being designed for rainbow trout and not steelhead, and states that the flows for steelhead seem to be inadequate. The comment also raises concern that the steelhead flows would not be implemented until steelhead get into the reaches below the dam and that the flows are part of what will enable that to happen.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for information on the studies and analyses that were conducted to develop and assess the flow release schedules. A more detailed description of the primary fisheries-related hydrologic study to determine amount of water needed to support steelhead is provided in the *Calaveras Dam Replacement Project, Fisheries Technical Report* (ETJV 2008; see Appendix A of that document), which is available for review at the San Francisco Planning Department. Please also refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding information on the analysis for steelhead.Also, the SFPUC has developed the CDRP Variant, which includes revised flow schedules and other fishery enhancements, which were developed, in part, through coordination with National Marine Fisheries Service (NMFS) and California Department of Fish and Game (CDFG). Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-TRT1-02 The comment expresses support for rebuilding the dam, noting that delays have not been caused by the environmental community. The comment is acknowledged. Because the comment does not address the adequacy or accuracy of the EIR, no further response is required.

O-TRT1-03 The comment expresses concern that the flow schedules "be fixed" before the EIR is completed. The comment states that Alameda Creek is becoming a success story and that the project is an opportunity for the SFPUC to move into the 21st century in terms of how it is dealing with migratory fish and to come into compliance with environmental laws.

Please see Response O-TRT1-1 for information on the flow schedules that would be implemented for steelhead. The EIR describes environmental laws (including CEQA) with which the project would be required to comply in various sections of the EIR, including Section 3.7, Discretionary Approvals and Agencies Involved, beginning on EIR page 3-70 (Vol. 1, Chapter 3), and for laws related to fisheries, Section 4.5.1.3, Regulatory Framework, beginning on EIR page 4.5-47 (Vol. 1, Chapter 4). Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding compliance with the California Fish and Game Code and the federal Endangered Species Act.

In addition, the SFPUC has developed the CDRP Variant, which includes revised flow schedules and other fishery enhancements that were developed, in part, through coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-TRT1-04 The comment correctly indicates that the SFPUC has agreed to implement water conservation measures to reduce demand for water that would otherwise come from the Tuolumne River system. Please see Response A-ACPWA-12 for information on the SFPUC's current and planned conservation program. Refer also to Section 9.2 of Chapter 9 for information about water supply under the CDRP Variant.

References

EDAW & Turnstone Joint Venture (ETJV). 2008. *Calaveras Dam Replacement Project, Fisheries Technical Report 2008.* Prepared by Hagar Environmental Science and Thomas R. Payne and Associates for EDAW & Turnstone Joint Venture and SFPUC.

11.2.36 TUOLUMNE RIVER TRUST, BAY AREA WATER STEWARDS, SALMON AID FOUNDATION, JESSIE RAEDER, 11/12/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

O-TRT2-01 The comment states that Alameda Creek is becoming a success story in regards to the work that has been ongoing to remove migration barriers and restore passage for migratory fish, and that all barriers will be removed or modified by the time the Calaveras Dam is rebuilt. The comment notes that 17 agencies and organizations have been working together for over a decade to remove or modify all of the barriers to migratory fish in Alameda Creek. The comment further states that proposed flows are designed for rainbow trout and are inadequate for steelhead migration and requests that the flows should be based on recommendations for federal regulatory agencies, like the National Marine Fisheries Service (NMFS).

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; Section 10.4.5, Current and Proposed Operations of ACDD and Calaveras Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for information on the analyses that were conducted to assess the flow release schedules. The *Calaveras Dam Replacement Project, Fisheries Technical Report* (ETJV 2008; see Appendix A of that document) presents a more detailed description of one of the primary hydrologic studies used to determine amount of water needed to support steelhead spawning. That document is available for review at the San Francisco Planning Department.

The SFPUC is one of the 17 agencies and organizations actively working with the Alameda Creek Fisheries Restoration Workgroup. The SFPUC removed the Sunol and Niles Dams from Alameda Creek in 2006 as part of the efforts to remove barriers in Alameda Creek.

The CDRP is currently undergoing review by NMFS as part of consultation under Section 7 of the federal Endangered Species Act; the US Army Corps of

Engineers is serving as the federal action agency. Please refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for more information on that consultation process.

In addition, the SFPUC has developed the CDRP Variant, which includes revised flow schedules and other fishery enhancements, which were developed, in part, through coordination with NMFS and California Department of Fish and Game (CDFG). Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

O-TRT2-02 The comment, which states that the Bay Area Water Stewards coalition supports the rebuilding of the dam and that fishery issues should be addressed, is acknowledged. Regarding fishery issues, see Section 4.5, Fisheries and Aquatic Habitat (beginning on EIR page 4.5-1, Vol. 1) and the master response presented in Section 10.4, Fisheries.

Regarding the effects of the CDRP Variant on fishery resources, please refer to Chapter 9, Section 9.3.5.

O-TRT2-03 The comment states that operation of the dam needs to be consistent with modern environmental laws, with FESA for steelhead trout, and the state Fish and Game Code, which requires that fish below dams be kept in good condition.

Project compliance with environmental laws is described in various sections in the EIR, including Section 3.7, Discretionary Approvals and Agencies Involved (Vol. 1, Chapter 3, EIR pages 3-70 – 3-74). Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding compliance with the state Fish and Game Code and FESA.

Refer to Section 9.2.2 in Chapter 9 for a description of fishery enhancements associated with the CDRP Variant.

O-TRT2-04 The comment raises a concern that the steelhead flows would not be implemented until steelhead get into the reaches below the dam and that the flows are part of what will enable that to happen.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on

Steelhead, regarding the timing of implementation of the proposed flow schedule for steelhead.

In addition, the SFPUC has developed the CDRP Variant, which includes revised flow schedules and other fishery enhancements that were developed, in part, through coordination with NMFS and CDFG. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

References

EDAW & Turnstone Joint Venture (ETJV). 2008. *Calaveras Dam Replacement Project, Fisheries Technical Report 2008.* Prepared by Hagar Environmental Science and Thomas R. Payne and Associates for EDAW & Turnstone Joint Venture and SFPUC.

11.2.37 TUOLUMNE RIVER TRUST, BAY AREA WATER STEWARDS, SALMON EGG COALITION, JESSIE RAEDER, 12/14/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

O-TRT3-01 The comment, which expresses the opinion that the project should move forward as quickly as possible, is acknowledged.

O-TRT3-02 The comment expresses approval that the SFPUC acknowledges the need to provide flows for steelhead, and states that the flows should be designed around steelhead.

Please refer to Section 10.4, Fisheries and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for information on the analyses that were conducted to assess the flow release schedules. The *Calaveras Dam Replacement Project, Fisheries Technical Report* (ETJV 2008; see Appendix A of that document) provides a more detailed description of the hydrologic study to determine amount of water needed to support steelhead.

O-TRT3-03 The commenter indicates that the amount of evaporation from Calaveras Reservoir is greater than the amount the SFPUC proposes to release for fisheries, and also states that their organization is impressed with the SFPUC's water conservation and recycling programs.

The SFPUC must account for evaporative losses as part of its water supply planning, and the hydrologic modeling conducted in support of the EIR incorporated calculations for evaporation appropriate to the climate and meteorological conditions at Calaveras Reservoir. Evaporative losses from the reservoir are not relevant to determining flow release schedules to support native fishes and other aquatic resources in Alameda Creek. The proposed flow release schedules are based on the habitat requirements of the affected species and habitats (see EIR, Vol. 1, Chapter 3, pp. 3-66 – 3-70). The impacts on fisheries and hydrology of implementing the proposed flow schedules are evaluated in Section 4.5 (Vol. 1, Chapter 4, starting on p 4.5-60) and Section 4.6 (Vol. 1, Chapter 4, starting on p. 4.6-68), respectively. For more information on the proposed flow schedules, refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant.

The commenter's opinion about the SFPUC's water conservation and recycling programs is acknowledged. (Response A-ACPWA-12 summarizes information on the SFPUC's current and planned water conservation program.)

O-TRT3-04 The comment requests that the EIR study the possible installation of a fish ladder at Calaveras Dam.

The request is noted; however, the SFPUC is not proposing to install a fish ladder on Calaveras Dam. Please refer to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments on fish passage at Calaveras Dam.

O-TRT3-05 The comment requests that the EIR study the possible removal of the Alameda Creek Diversion Dam (ACDD) or the installation of a fish ladder at the ACDD.

The SFPUC is not proposing removal of the ACDD under the proposed project because the presence of the ACDD is part of existing conditions (i.e., not part of the project) and the project's impacts to fishery resources do not warrant its removal, as documented in EIR Section 4.5, Fisheries and Aquatic Habitat. In addition, since publication of the Draft EIR, the SFPUC has developed the CDRP Variant, described in Chapter 9 of this Comments and Responses document, which does include installation of a fish ladder at the ACDD among other fishery enhancements (refer to Chapter 9 for more information).

O-TRT3-06 The comment, which expresses the opinion that San Francisco's water supply should be operated in a sustainable manner and that fisheries issues are related to sustainability, is acknowledged. Please see EIR page 4.2-16 (Vol. 1, Chapter 4, Section 4.2.5.1) regarding the project's consistency with the San Francisco Sustainability Plan. Regarding fisheries issues, refer to the master response presented in Section 10.4, Fisheries. Regarding the effects of the CDRP Variant on fisheries, refer to Chapter 9, Section 9.6.

References

EDAW & Turnstone Joint Venture (ETJV). 2008. *Calaveras Dam Replacement Project, Fisheries Technical Report 2008.* Prepared by Hagar Environmental Science and Thomas R. Payne and Associates for EDAW & Turnstone Joint Venture and SFPUC.

11.3 INDIVIDUALS

Listed below are the individuals who submitted comments on the *Calaveras Dam Replacement Project Draft EIR*, along with the order of the responses in this subsection, the commenter code for each person, and the page number on which each set of responses begins.

Response Order	Code	Commenter	Comment Format and Date	Beginning Page Number of Responses
11.3.1	I-Atkinson	Rebecca Atkinson	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 35-37	11.3.1-1
11.3.2	I-Blickenstaff	Jim Blickenstaff, Member, Mount Diablo Sierra Club	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 25-27	11.3.2-1
11.3.3	I-Bridgman	Derrell Bridgman, Member, Northern California Council of Federation of Fly Fishers	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, page 23	11.3.3-1
11.3.4	I-Cate	Corey Cate, Member, California Sport Fishing Protection Alliance, Tracy Fly Fishers, Tri Valley Fly Fishers, and the Northern California Council of Federation of Fly Fishers	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 23-25	11.3.4-1
11.3.5	I-Cant	John Cant	Public hearing comments, Fremont Main Library, November 10, 2009, pages 24-26	11.3.5-1
11.3.6	I-Carroll	John Carroll, Member, Alameda Creek Alliance	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 19-20	11.3.6-1
11.3.7	I-Colon	Tim Colon	Public hearing comments, San Francisco City Hall, November 12, 2009, page 31	11.3.7-1

Response Order	Code	Commenter	Comment Format and Date	Beginning Page Number of Responses
11.3.8	I-Edgecombe	Ken Edgecombe	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 35-36	11.3.8-1
11.3.9	I-Epp	Walter Epp	Email, December 21, 2009	11.3.9-1
11.3.10	I-Gargas	Dave Gargas, Member, Alameda Creek Alliance	Public hearing comments, Fremont Main Library, November 10, 2009, page 24	11.3.10-1
11.3.11	I-Graber	Douglas Graber	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 27-28	11.3.11-1
11.3.12	I-Hansen	Richard Hansen	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 27-28	11.3.12-1
11.3.13	I-Kirby	Glenn Kirby	Public hearing comments, Fremont Main Library, November 10, 2009, pages 20-22	11.3.13-1
11.3.14	I-LaCommare	Bill LaCommare, President, MediaWorks Software	Email, November 2, 2009	11.3.14-1
11.3.15	I-Lawrence	Steve Lawrence	Email, October 5, 2009	11.3.15-1
11.3.16	I-Lucas1	Libby Lucas	Email, December 21, 2009	11.3.16-1
11.3.17	I-Lucas2	Libby Lucas, Member, California Native Plant Society	Email, December 21, 2009	11.3.17-1
11.3.18	I-Lynn	Mark Lynn	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 40-42	11.3.18-1

Response Order	Code	Commenter	Comment Format and Date	Beginning Page Number of Responses
11.3.19	I-Means	Robert Means	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, page 44	11.3.19-1
11.3.20	I-Meghrouni	Sara Meghrouni	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 20-21	11.3.20-1
11.3.21	I-Reazer	Dan Reazer	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 38-40	11.3.21-1
11.3.22	I-Richardson	Matt Richardson	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 33-35	11.3.22-1
11.3.23	I-Robertson	Mary Jean Robertson, Ohlone Profiles Project	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 20-21	11.3.23-1
11.3.24	I-Roy	Jeff Roy	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 33-34	11.3.24-1
11.3.25	I-Salkow	Robert Salkow	Email, November 3, 2009	11.3.25-1
11.3.26	I-Sanderell	Richard Sanderell, Visions of the Future Environment	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 42-44	11.3.26-1

Response Order	Code	Commenter	Comment Format and Date	Beginning Page Number of Responses
11.3.27	I-Sargent	Gary Sargent	Public hearing comments, Sunol Glen Elementary School, December 14, 2009, pages 45-46	11.3.27-1
11.3.28	I-Starbird	Tim Starbird	Public hearing comments, Fremont Main Library, November 10, 2009, pages 22-24	11.3.28-1
11.3.29	I-Urqhart	Kevan Urqhart, Certified Fisheries Professional – American Fisheries Society, and Member of the American Institute of Fishery Research Biologists, supporting Alameda Creek Alliance and the Center for Biological Diversity	Written comment letter, December 21, 2009	11.3.29-1
11.3.30	I-Workman	Jamie Workman	Public hearing comments, San Francisco City Hall, November 12, 2009, pages 32-33	11.3.30-1
11.3.31	I-Werning	Karla and Curtis Werning	Written comment submitted at the Sunol Glen Elementary School public hearing, December 14, 2009	11.3.31-1

11.3.1 REBECCA ATKINSON, 11/12/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Atkinson-01 The comment states that Calaveras Dam could contribute positively to habitat restoration through releases of flows greater than those indicated in the Draft EIR. The comment is acknowledged. Please refer to the master response in Section 10.3, Hydrology, and specifically to Section 10.3.3, Diversions and Streamflows, for discussion of proposed flow releases and effects on streamflow. Refer to the master response in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for additional discussion of proposed flow releases and habitat restoration.

I-Atkinson-02 The comment requests a discussion in the EIR of all species of concern in combination with the necessary flows for each life cycle stage, and better mitigation measures to ensure that the flows needed are provided in compliance with the Endangered Species Act. The comment requests substantiation of the less-than-significant determinations, the latest scientific data related to the Endangered Species Act and climate change.

The EIR identifies and discusses fish species known and thought to be present in the area that could be affected by the proposed project and the project's potential impacts on these resources, in Section 4.5, Fisheries and Aquatic Habitat (Vol. 1, Chapter 4). All species of concern that were found, or for which habitat is present in the affected areas, are described. The analysis is based on current available scientific data as well as field observations made specifically for the EIR (see EIR page 4.5-1 in Vol. 1, Chapter 4, Section 4.5). The field observations are reported in *Calaveras Dam Replacement Project, Fisheries Technical Report*, prepared by Hagar Environmental Science and Thomas R. Payne & Associates (ETJV 2008). Mitigation measures to reduce impacts on these species are identified on EIR pages 5-16 – 5-17 (Vol. 2, Chapter 5, Section 5.5), and mitigation measures to reduce impacts on water quality that could affect these species are identified in Section 5.7 on EIR pages 5-18 – 5-26. Flows for steelhead are discussed on EIR pages 3-69 – 3-70 (Vol. 1, Chapter 3, Section 3.6.6) as well as in Section 6.2.3.5 on EIR pages 6-23 – 6.32. Additional detail related to steelhead is available in Appendix J to the EIR, Future Steelhead Cumulative Impacts Analysis – Central California Coast Steelhead. Please also refer to the master response in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for discussions of the various fish species, including steelhead, that would be affected by changes in flow in Alameda Creek as a result of the proposed project and compliance with regulatory requirements. The SFPUC would undertake the proposed project in accordance with all required state and federal regulatory permits and approvals, including approvals under the state and federal Endangered Species Acts and the California Fish and Game Code.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 35 – 37.

Additional fisheries enhancements and flows to support native fishes and potential future steelhead are included in the CDRP Variant, which were developed as part of the Endangered Species Act consultation process with the National Marine Fisheries Service. Please refer to Chapter 9 in this Comments and Responses document, and in particular, to Section 9.2, Description of the CDRP Variant, Section 9.3.5, Fisheries and Aquatic Habitat, and Section 9.3.6, Hydrology, for additional information.

The EIR discusses special-status plants and animals in Section 4.4, Vegetation and Wildlife (Volume 1, Chapter 4). That section of the EIR identifies all species of concern in relation to the state and federal Endangered Species Acts, based on published reports and field studies carried out for the EIR. Mitigation measures to reduce impacts on these species are detailed on EIR pages 5-2 – 5-16 (Vol. 2, Chapter 5, Section 5.4).

The effects of climate change, if any, on special-status species in the study area are too speculative to identify at this time, and as stated above, the impact analysis is based on best available scientific data as well as field observations made specifically for the EIR. Additional discussion of the effects of global climate change and the SFPUC's facility improvement projects included under the Water System Improvement Program (WSIP), of which the proposed project is a part, is presented in the WSIP Program EIR in Volume 7a, Chapter 14, Section 14.11 (San Francisco Planning Department 2008). Global climate change is discussed in the EIR in relation to greenhouse gas emissions in Section 4.13, Air Quality, on EIR pages 4.13-14 – 4.13-15, 4.13-23 – 4.13-30, and 4.13-42 – 4.13-44 (Vol. 2, Chapter 4). Please also refer to master response in Section 10.5, Greenhouse Gas Emissions.

I-Atkinson-03 The comment concerns the use of SFPUC land for mitigation rather than private lands that may be threatened by development. Please refer to Responses O-ACA1-06 and O-ACA&CBD1-64.

I-Atkinson-04 The comment requests better mitigation for fisheries and other species in the watershed and better mitigation for addressing climate change.

See Response I-Atkinson-02, above, regarding mitigation measures for fisheries and other species and information about climate change. The mitigation measures identified in the EIR would reduce impacts on native fishes and other aquatic and terrestrial species to less-than-significant levels, and are sufficiently adequate to mitigate the impacts identified.

As explained on EIR page 4.13-44 (Vol. 2, Chapter 4, Section 4.13), mitigation measures identified to reduce other air emissions during construction would also help to reduce greenhouse gas emissions, believed to be one of the causes of global climate change. However, as also explained on this page, these measures would not eliminate these emissions, and no additional feasible mitigation measures are available to further reduce this impact. See Response I-Atkinson-02 regarding climate change and the master response in Section 10.5, Greenhouse Gas Emissions, for additional discussion related to this issue

References

EDAW & Turnstone Joint Venture (ETJV). 2008. Calaveras Dam Replacement Project, Fisheries Technical Report 2008. Prepared by Hagar Environmental Science and Thomas R. Payne and Associates for EDAW & Turnstone Joint Venture and SFPUC.

San Francisco Planning Department. 2008. *Water System Improvement Program*, Program Final Environmental Impact Report, File No. 2005.0159E, State Clearinghouse No. 2005092026, October 20, 2008.

11.3.2 JIM BLICKENSTAFF, MEMBER, MOUNT DIABLO SIERRA CLUB, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Blickenstaff-01 The comment states that environmental studies often do not appreciate the cumulative effects of a project.

Cumulative impacts of the Draft EIR project are discussed on EIR pages 6-7 – 6-52 (Vol. 2, Chapter 6, Section 6.2). Consistent with requirements of the California Environmental Quality Act, this section addresses each of the relevant environmental topics and establishes whether construction or operation of the replacement dam would contribute considerably to significant cumulative impacts associated with the project in combination with other past, present, and reasonably foreseeable future projects in the study area. Cumulative impacts of the CDRP Variant are discussed in Chapter 9, Project Variant, Section 9.5, in this Comments and Responses document.

I-Blickenstaff-02 The comment suggests that it is important to understand the history of the habitat in order to establish correct flows for mitigation and restoration of fisheries, including steelhead and indigenous trout.

EIR Section 4.5.1 (Vol. 1, Chapter 4), the setting section for Fisheries and Aquatic Habitat, provides a comprehensive description of the aquatic habitats in the study area, including pertinent history of the fishery habitat in the Alameda Creek watershed. Please also refer to the master response presented in Section 10.2, Baseline Used in the Environmental Analysis, specifically to Section 10.2.2, Use of Appropriate Baselines, and the subsection entitled "Baseline for Project-Specific Impacts" for a discussion of baselines for different resources areas. As stated there, "the current 'baseline' conditions are a reflection and culmination of historical as well as existing and ongoing activities that affect a specific resource,…" Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of effects on steelhead.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 25 – 27.

I-Blickenstaff-03 The comment suggests that the project should be considered as both a water storage project to provide more water for people and a restoration project.

As described in EIR Section 3.2.2 (Vol.1, Chapter 3), one of the primary objectives of the project is to restore the water supply and capacity of Calaveras Reservoir. In addition, although not an explicit project goal or objective, the proposed project includes a number of elements that would contribute to restoration efforts in the Alameda Creek watershed. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals; Section 10.4.6, Other Anadromous Fish Species in Alameda Creek; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for discussions of restoration of habitat for fish in the Alameda Creek watershed.

Please also see Chapter 9, Project Variant, for a description and analysis of the CDRP Variant that incorporates additional fisheries enhancements, including additional flows for fish.

11.3.3 DERRELL BRIDGMAN, MEMBER, NORTHERN CALIFORNIA COUNCIL OF FEDERATION OF FLY FISHERS, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

I-Bridgman-01 The comment requests that the SFPUC learn to conserve water and to leave some for the watershed's fish and wildlife.

The comment does not address the adequacy or accuracy of the EIR. Please see Response A-ACPWA-12 for a description of the SFPUC's current and planned conservation program and the recycling and groundwater projects that are being conducted as part of its Water System Improvement Program (WSIP). Proposed releases for resident rainbow trout and steelhead are described on EIR pages 3-63 – 3-70 (Vol. 1, Chapter 3, Section 3.6). Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals; Section 10.4.6, Other Anadromous Fish Species in Alameda Creek; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for discussions of restoration of habitat for fish in the Alameda Creek watershed.

Please refer to Chapter 9, Sections 9.2, Description of the CDRP Variant; 9.3.4, Vegetation and Wildlife; and 9.3.5, Fisheries and Aquatic Habitat, for discussions of the CDRP Variant fisheries enhancements and the impacts of the Variant on the watershed's fish and wildlife.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, page 23.

11.3.4 COREY CATE, MEMBER, CALIFORNIA SPORT FISHING PROTECTION ALLIANCE, TRACY FLY FISHERS, TRI VALLEY FLY FISHERS, AND THE NORTHERN CALIFORNIA COUNCIL OF FEDERATION OF FLY FISHERS, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Cate-01 The comment expresses concern for the resident trout and steelhead fisheries and the need for sufficient flows especially in winter, and asks that the SFPUC support fish restoration.

The comment does not address the adequacy or accuracy of the EIR. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals; Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for discussions of resident trout and steelhead. Please also see Chapter 9, Section 9.2, Description of the CDRP Variant, for a discussion of fisheries enhancements, and Section 9.3.5, Fisheries and Aquatic Habitats, Section 9.3.6, Hydrology, and Section 9.5, Cumulative Impacts of the CDRP Variant, for discussions of the impacts of the CDRP Variant on fish and flows in Alameda Creek.

I-Cate-02 The comment states that the Draft EIR ignores the importance of steelhead in favor of resident rainbow trout and that rainbow trout are less important than steelhead.

In Section 4.5, Fisheries and Aquatic Habitat (Vol. 1, Chapter 4), the EIR discusses impacts of the CDRP on resident rainbow trout and other fish that are currently found in the reservoir and in the portions of Alameda and Calaveras Creeks that would be directly affected by the proposed project. Steelhead are not currently found in the reaches of Alameda Creek and Calaveras Creek near

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 23 – 25.

Calaveras Dam or the Alameda Creek Diversion Dam, due to downstream barriers that prevent passage (see EIR page 4.5-34 in Vol. 1, Chapter 4, Section 4.5.1.1, and pages 4.5-44 – 4.5-45 in Section 4.5.1.2). Because these downstream barriers are expected to be removed or modified in the near future to allow steelhead to migrate up Alameda and Calaveras Creeks, the EIR assesses potential cumulative impacts on fisheries and aquatic habitats, including potential impacts on steelhead (Vol. 2, Chapter 6, pages 6-23 – 6-32). Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead. See also Chapter 9, Project Variant, and specifically Section 9.5, for a discussion of the CDRP Variant's cumulative impacts, including impacts on steelhead.

11.3.5 JOHN CANT, 11/10/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Cant-01 The comment discusses the need for more conservation and recycling.

The comment does not address the adequacy or accuracy of the EIR. Please see Response A-ACPWA-12 for a description of the SFPUC's current and planned conservation program and the recycling and groundwater projects that are being conducted as part of its Water System Improvement Program (WSIP).

I-Cant-02 The comment asserts that proposed streamflows are insufficient for migratory fish.

The adequacy of the proposed flow release schedules to support steelhead migration is addressed in the EIR cumulative impact analysis (see Vol. 2, Section 6.2.3.3, page 6-29). Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of future effects on steelhead.

I-Cant-03 The comment states that there is no plan to provide fish passage at the Alameda Creek Diversion Dam or Calaveras Dam.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding fish passage at the Alameda Creek Diversion Dam and Calaveras Dam.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes construction of a fish ladder at the ACDD as well as revised flow schedules, installation of a fish screen at the Alameda Creek diversion tunnel and Calaveras Reservoir, and an Adaptive Management Implementation Plan. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant. The CDRP Variant and the Draft EIR Project are both addressed in the master response sections referenced above.

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[1] Comment provided at the public hearing held at Fremont Library, November 10, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 24 – 26.

I-Cant-04 The comment states that mitigation measures for construction impacts are insufficient.

Mitigation measures that would reduce impacts during construction are listed in EIR Volume 2, Chapter 5. There are construction-related mitigation measures in the areas of recreation (EIR page 5-1), vegetation and wildlife (EIR pages 5-2 – 5-13), fisheries and aquatic habitat (EIR page 5-16), water quality (EIR pages 5-18 – 5-26), geology (EIR page 5-27), hazards and hazardous materials (EIR pages 5-27 – 5-32), cultural resources (EIR pages 5-32 – 5-37), transportation (EIR pages 5-37 – 5-38), air quality (EIR pages 5-38 – 5-40), and noise (EIR pages 5-40 – 5-42). The comment does not provide any specifics as to inadequacy of mitigation measures; therefore, no additional response is necessary.

11.3.6 JOHN CARROLL, MEMBER, ALAMEDA CREEK ALLIANCE, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Carroll-01 The comment requests that SFPUC restore habitat for steelhead.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of steelhead in Alameda Creek in the future.

I-Carroll-02 The comment states that the Draft EIR uses two different baselines and asks that there be agreement about which baseline information can be used. The comment also asks that the project provide a streamflow that will support steelhead.

Please refer to the master response presented in Section 10.2, Baselines Used in the Environmental Analysis, and specifically to Section 10.2.2, Use of Appropriate Baselines, for information about the baselines used in the analyses and the reasons for the different baselines. Steelhead flow releases are discussed on EIR pages 3-69 – 3-70 (Vol. 1, Chapter 3, Section 3.6.6). Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of flows to support steelhead.

Additionally, as indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules for Alameda and Calaveras Creeks and an Adaptive Management Implementation Plan for Central California Coast steelhead. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 19 – 20.

11.3.7 TIM COLON, 11/12/09[1]

I-Colon-01 The comment expresses the opinion that it is imperative that San Francisco efficiently manage its water resources, and that the project should be approved as quickly as possible.

The comment is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no response is required.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, page 31.

11.3.8 KEN EDGECOMBE, 12/14/09[1]

I-Edgecombe-01	The comment expresses the opinion that the project is needed to provide water storage and to address seismic issues on the Calaveras Fault. The comment is acknowledged. The comment does not address the accuracy or adequacy of the EIR; therefore, no further response is required.
I-Edgecombe-02	The comment notes that there are two hatcheries on the Russian River but there is not a sustainable fishery there with opportunities for fishing. The comment is acknowledged. The comment does not address the accuracy or adequacy of the EIR; therefore, no further response is required.
I-Edgecombe-03	The comment expresses the opinion that the Draft EIR is environmentally responsible and the project should proceed as soon as possible. The comment is acknowledged. The comment does not address the accuracy or adequacy of the EIR; therefore, no further response is required.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 35 – 36.

11.3.9 WALTER EPP, 12/21/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Epp-01 The comment states that the criteria for flow regimes must be contingent on the current and future health of the watershed and at-risk and keystone species including anadromous fish, without limiting flows to fixed volumes of water.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a discussion of the proposed flow schedules and the basis for their development, and Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, regarding flow schedules and effects on fish and fish habitat.

I-Epp-02 The comment suggests that dam and watershed management should include a process for adjustments as more scientific information becomes available.

As the comment suggests, where appropriate, an adaptive management approach has been integrated into the Draft EIR project's mitigation measures developed to address impacts on biological resources. This approach is reflected in the following mitigation measures: 5.4.2c, Habitat Restoration Measures – Success Criteria, Monitoring, and Adaptive Management; 5.4.3k, Compensation Measures – Adaptive Management Plan; and 5.5.5b, Resident Rainbow Trout Adaptive Management. An adaptive management approach for the protection of steelhead is addressed in the EIR under Cumulative Impacts Section 6.2.3.3, Fisheries and Aquatic Habitat (Vol. 2, Chapter 6, pages 6-30 – 6-31). Please also refer to the master response presented in Section 10.4, Fisheries, for further discussion of management measures that would be implemented to protect and adaptively enhance fishery resources.

As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules as well as an Adaptive Management Implementation Plan. These enhancements were developed in close coordination with the National Marine Fisheries Service and California Department of Fish and Game. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

I-Epp-03 The comment acknowledges various agencies and laws that regulate actions taken in areas with natural resources and suggests going beyond the minimum regulatory requirements.

The regulatory framework regarding natural resources applicable to the proposed project is presented in the EIR Chapter 4 in the following sections: Section 4.4.1.3, Vegetation and Wildlife; Section 4.5.1.3, Fisheries and Aquatic Habitat; Section 4.7.1.2, Water Quality; and Section 4.13.1.2, Air Quality. The comment does not address the accuracy or adequacy of the EIR; therefore, no further response is required.

11.3.10 DAVE GARGAS, MEMBER, ALAMEDA CREEK ALLIANCE, 11/10/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR project and the CDRP Variant.

I-Gargas-01 The comment, which asks that adequate flows for steelhead be established before the dam is built, is acknowledged.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a discussion of the proposed flow schedules and the basis for their development; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for a discussion on fish passage issues; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion on steelhead migration. As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes revised flow schedules as well as an Adaptive Management Implementation Plan. These enhancements were developed in close coordination with the National Marine Fisheries Service and California Department of Fish and Game. Please refer to Chapter 9 of this Comments and Responses document for a description and analysis of the CDRP Variant.

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[1] Comment provided at the public hearing held at Fremont Main Library, November 10, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, page 24.

11.3.11 DOUGLAS GRABER, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Graber-01 The comment expresses the opinion that the project does not have enough interest in restoring the fish that were present in Alameda Creek before the dam was built.

EIR Section 4.5.1 (Vol. 1, Section 4.5), the setting section for Fisheries and Aquatic Habitat, provides a comprehensive description of the aquatic habitats in the study area, including pertinent history of the fishery habitat in the Alameda Creek watershed. Please also refer to the master response presented in Section 10.2, Baseline Used in the Environmental Analysis, specifically to Section 10.2.2, Use of Appropriate Baselines, and the subsection entitled "Baseline for Project-Specific Impacts" for a discussion of baselines for different resource areas. As stated there, the current 'baseline' conditions are a reflection and culmination of historical as well as existing and ongoing activities that affect a specific resource. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam; Section 10.4.6, Other Anadromous Fish Species in Alameda Creek; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for discussions of restoration of habitat for fish in the Alameda Creek watershed.

As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes enhancements to fishery resources and other refinements to the project analyzed in the Draft EIR. As described in Chapter 9, the CDRP Variant was developed as a result of the SFPUC's ongoing coordination with resource agencies and its own project development and design process. The Variant includes installation of a fish screen at the upstream end of the diversion tunnel at the Alameda Creek Diversion Dam

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 27 – 28.

(ACDD) and a fish ladder at the ACDD, installation of fish screens at Calaveras Dam Adits #1 and #2, and long-term implementation of an Adaptive Management Implementation Plan for Central California Coast steelhead as part of an overall management strategy to support and monitor steelhead in the southern Alameda Creek watershed.

I-Graber-02 The comment expresses the opinion that the Draft EIR does not address improving flows to help upstream or downstream migration enough, and that the project should have more obstruction removal.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a discussion of the proposed flow schedules; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for a discussion of flow effects on fishery habitat and on passage issues at the ACDD and Calaveras Dam; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion on steelhead migration.

As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes a fish ladder at the ACDD. See Chapter 9 for further discussion of the Variant and its environmental impacts.

11.3.12 RICHARD HANSEN, 11/12/09[1]

I-Hansen-01	The comment expresses support for the expeditious approval of the EIR and for construction of the dam. The comment is acknowledged. The comment does not address the adequacy or accuracy of the EIR; therefore, no further response is required.
I-Hansen-02	The comment notes that the design standards used to construct the existing dam are obsolete and requests that the project move forward. The comment does not address the adequacy or accuracy of the EIR. The project objectives are listed on EIR page 3-6 (Vol. 1, Chapter 3, Section 3.2.2). One objective of the proposed project is to improve seismic reliability. As discussed in Section 3.2.2.3 on EIR pages 3-8 – 3-9, the proposed project is intended to respond to concerns regarding seismic performance by replacing the existing dam with a dam designed to withstand seismic forces that may occur at the site. The request to move the project forward is acknowledged.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 27 – 28.

11.3.13 GLENN KIRBY, 11/10/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Kirby-01 The comment expresses support for Alameda Creek Alliance's efforts to ensure adequate flows in Alameda Creek. To the extent that this comment addresses hydrology in Alameda Creek, a response to this comment is found in the master response presented in Section 10.3, Hydrology. To the extent that this comment is also related to fisheries, a response to this comment is found in the master response presented in Section 10.4, Fisheries.

I-Kirby-02 The comment requests that, in addition to sweeping, the contractor be required to construct roadway repairs or patches to a minimum standard that would ensure safety of traffic, and in particular cyclists on weekends.

Mitigation Measure 5.12.4a, Traffic Control Plan, on EIR pages 5-37 – 5-38 (Vol. 2, Chapter 5), requires that the SFPUC or its contractor implement a Traffic Control Plan, and to the extent applicable, the plan should conform to the state's Manual of Traffic Controls for Construction and Maintenance Work Areas. As stated on EIR page 5-38, the SFPUC or its contractor would be required to repair or restore the public roadway rights-of-way to their pre-construction conditions upon completion of construction. Maintenance of adequate driving and bicycling conditions on Calaveras Road during the construction period would also be addressed as part of the Traffic Control Plan.

Please refer also to Response O-EBBC-01 for additional discussion of roadway maintenance and bicycle safety, including information on a related agreement between the SFPUC and Alameda County.

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[1] Comment provided at the public hearing held at Fremont Library, November 10, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 20 – 22.

I-Kirby-03 The comment requests that the Fremont Freewheeler Primavera bicycling tour be accommodated during project construction, similar to accommodations provided for the AMGEN tour.

This comment is responded to in its entirety in the second paragraph of Response O-FFBC1-02.

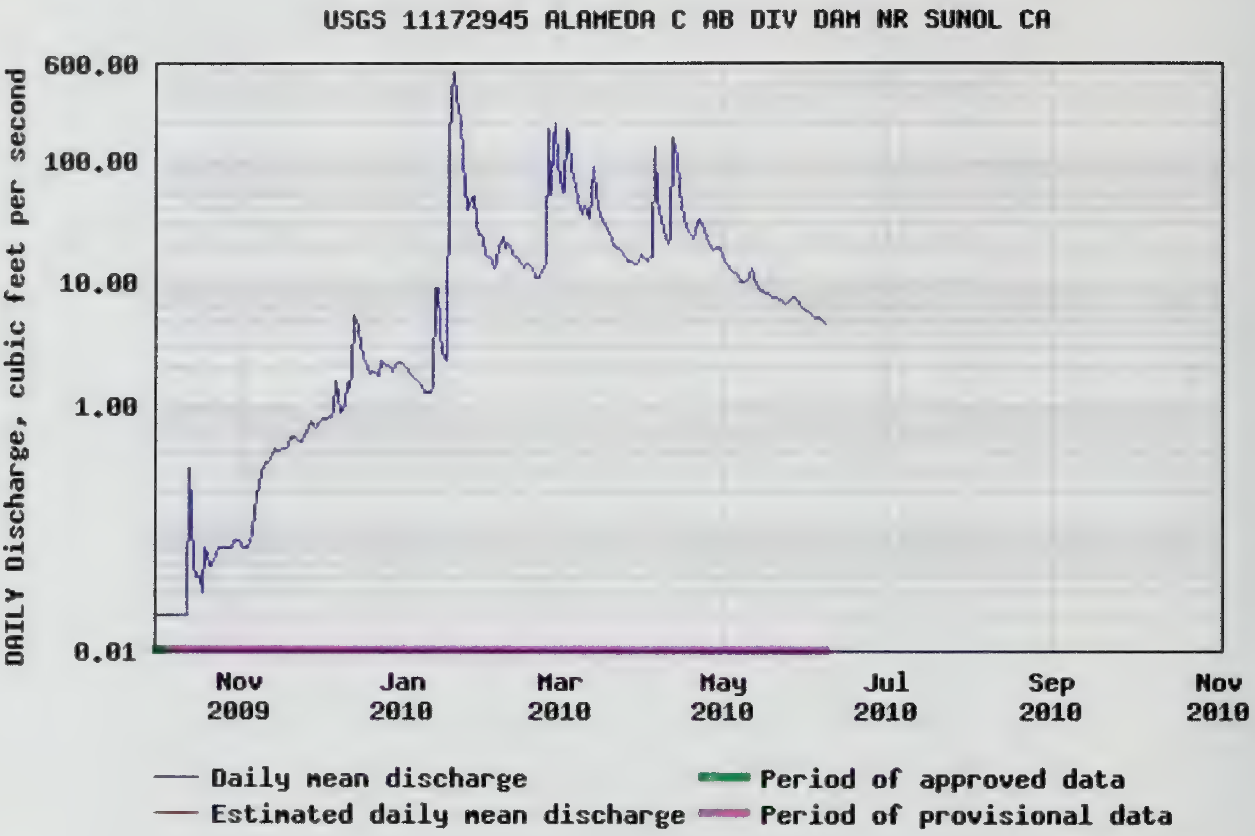
11.3.14 BILL LACOMMARE, PRESIDENT, MEDIAWORKS SOFTWARE, 11/02/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-LaCommare-01 The comment reports observations of low water level in Alameda Creek in October and early November 2009, and requests that minimum flow standards be set in light of recent efforts and financial investments to restore steelhead and salmon in the Alameda Creek watershed.

The comment also notes that there have been efforts to restore steelhead and salmon to historic spawning areas in the Alameda Creek watershed. The EIR addresses steelhead habitat in Alameda Creek on EIR pages 4.5-39 to 4.5-41 (Vol. 1, Chapter 4, Section 4.5.1.2, Sensitive Fisheries and Aquatic Habitats), and potential future steelhead in the creek above existing barriers on EIR pages 6-23 to 6-32 (Vol. 2, Chapter 6, Section 6.2). Refer also to master response 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as part of the Draft EIR Project and the CDRP Variant regarding proposed flow schedules and information on the analyses that were conducted to assess the flow release schedules, to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for information on monitoring and adaptive management for steelhead, and Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for a discussion of Chinook and coho salmon in Alameda Creek.

The first precipitation of the rainy season often produces little to no measurable natural streamflow, as was the case in October 2009. Streamflow data from the U.S. Geological Survey's gaging station located above the Alameda Creek Diversion Dam (ACDD) shown in **Figure 11.3.1: Average Daily Flow in Alameda Creek above the SFPUC's Alameda Creek Diversion Dam 2009 – 2010**, represent unimpaired or natural conditions for the 2009/2010 rainy season and corroborate the commenter's observation of low flows in the autumn of 2009.



SOURCE: USGS 2010

FIGURE 11.3.1: AVERAGE DAILY FLOW IN ALAMEDA CREEK ABOVE THE SFPUC'S ALAMEDA CREEK DIVERSION DAM 2009-2010

With regard to minimum flow standards, the proposed project would increase the average annual flows in Alameda Creek compared to the existing condition with implementation of the proposed flow release schedules for native fishes and other aquatic resources as described on EIR pages 3-66 – 3-70 (Vol. 1, Chapter 3, Sections 3.6.5 and 3.6.6). See also the master response in Section 10.3, Hydrology, and specifically Section 10.3.3, Diversions and Streamflow, which discusses flow in Alameda Creek.

The comment also notes that there have been efforts to restore steelhead and salmon to historic spawning areas in the Alameda Creek watershed. The EIR addresses steelhead habitat in Alameda Creek on EIR pages 4.5-39 – 4.5-41 (Vol. 1, Chapter 4, Section 4.5.1.2, Sensitive Fisheries and Aquatic Habitats), and potential future steelhead in the creek above existing barriers on EIR pages 6-23 – 6-32 (Vol. 2, Chapter 6, Section 6.2). Refer also to master response 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for a discussion of Chinook and coho salmon in Alameda Creek.

As indicated in the preface to this response, the SFPUC developed a variant of the project that includes revised instream flow schedules for Alameda and Calaveras Creeks, installation of a fish screen at the upstream end of the diversion tunnel at the ACDD, a fish ladder at the ACDD, and long-term implementation of an Adaptive Management Implementation Plan for Central California Coast steelhead as part of an overall management strategy to support and monitor steelhead in the southern Alameda Creek watershed. Refer to Chapter 9, Project Variant, for a description and analysis of the CDRP Variant.

References

U.S. Geological Survey (USGS). 2010. Figure based on information accessed at the following website: http://nwis.waterdata.usgs.gov/ca/nwis/dv?cb_00060=on&format=gif_default &begin_date=2009-10-01&end_date=2010-11-02&site_no=11172945&referred_module=sw.

11.3.15 STEVE LAWRENCE, 10/05/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potentially environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

I-Lawrence-01 The comment suggests that the replacement dam is smaller than was formerly planned and questions whether adequate storage capacity and water system reliability would be provided to account for climate change and crises.

While the SFPUC analyzed a range of dam types and sizes (including larger dams), the SFPUC does not currently propose to enlarge the dam or expand the reservoir capacity beyond its original size, as explained on EIR page 3-9 (Vol. 1, Chapter 3, Section 3.2.2.4). Please also refer to the master response presented in Section 10.1, Potential Future Enlargement of Calaveras Reservoir, and specifically to Section 10.1.2, Potential Future Enlargement of Calaveras Dam, for a discussion of the issues raised by this comment.

The SFPUC adopted the overall Water System Improvement Program (WSIP) to provide comprehensive improvement of the regional water system to meet service reliability and delivery goals that include the ability to better respond and provide service through a range of potential emergency scenarios and extended drought scenarios. In addition, the program was also developed in light of the SFPUC's current information on potential climate change effects on water supply reliability for its regional system. The CDRP is one element of the overall WSIP that, together with implementation of the other WSIP projects, will provide adequate water supply delivery and reliability to meet the SFPUC's adopted level of service goals.

11.3.16 LIBBY LUCAS, 12/21/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Lucas1-01 The comment asks if the EIR will address the project impacts on migratory waterfowl, butterflies and bald eagle.

Impacts on wildlife, including butterflies and bald eagle, are discussed in the EIR. Impact on the callippe silverspot butterfly is discussed on EIR pages 4.4-24 – 4.4-26 (Vol. 1, Chapter 4, Section 4.4). Impact on the bald eagle is discussed on EIR pages 4.4-50 – 4.4-54. Impact on migratory waterfowl is not discussed in the EIR, as the proposed project, including removal of the top of Observation Hill and Hill 1000, would have no impact on these animals. No special-status migratory waterfowl were identified in Appendix C.1 (Vol. 3) in the list of special-status wildlife species known or with potential to occur in the CDRP study area.

I-Lucas1-02 The comment expresses concern regarding fill of wetlands at the northwestern arm of the reservoir.

This comment is acknowledged. Working with regulatory agencies, the SFPUC revised Disposal Site 3 to avoid and minimize impacts on sensitive resources prior to publication of the Draft EIR (URS 2008). As described in the EIR Project Description, on EIR pages 3-48 – 3-49 (Vol. 1, Chapter 3, Section 3.5.1.6), Disposal Site 3 is proposed to be located in the northwestern corner of the reservoir. Freshwater marsh and seep wetlands would be affected as a result of the use of Disposal Site 3, as explained on EIR page 4.4-76 in the discussion of Impact 4.4.1 (Vol. 1 Chapter 4, Section 4.4). Mitigation Measure 5.4.1, on EIR pages 5-2 – 5-9 (Vol. 2, Chapter 5, Section 5.4), would require implementation of avoidance and minimization measures to reduce impacts on aquatic habitat areas before construction. Mitigation Measure 5.4.2, on EIR pages 5-9 – 5-10, requires habitat restoration to restore temporarily impacted wetland areas, and Mitigation Measure 5.4.3, on EIR pages 5-10 – 5-17, requires full compensation for temporal, long-term, and permanent impacts on wetlands.

Reference

URS Corporation. 2008. CUW 37401 - Calaveras Dam Replacement Project Alternatives Analysis of Disposal Options for Surplus Soil and Rock. Prepared for the SFPUC. March 5, 2008.

11.3.17 LIBBY LUCAS, MEMBER, CALIFORNIA NATIVE PLANT SOCIETY, 12/21/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Lucas2-01 The comment expresses concern that the groundwater plume at the former Calaveras Test Site could affect water quality in the reservoir when the water level is raised, particularly because the plume appears to be in the Calaveras Creek channel or floodway. See Response O-CNPS2-08 for a discussion of this issue.

I-Lucas2-02 The comment states that the Calaveras Fault zone is shown along different sides of the northern end of the Calaveras Reservoir in Figure 4.8.1: Lithology and Geologic Features of the Project Site, on EIR page 4.8-4, and Figure 4.8.2: Regional Fault Locations, on EIR page 4.8-9, and asks which figure is accurate and whether the fault passes under the face of the dam. See Response O-CNPS2-05 for a response to this issue.

I-Lucas2-03 The comment expresses concern regarding designation of an existing wetland area at the northwest arm of the reservoir as a spoils disposal area and questions whether the California Department of Fish and Game and the U.S. Corps of Engineers have been notified. The comment also questions the availability of equivalent wetlands for mitigation and the mitigation ratio. See Response O-CNPS2-17 for a response to this issue.

I-Lucas2-04 The comment requests that “more comprehensive” plant surveys conducted in the past be discussed. See Response O-CNPS2-19 for a response to this issue.

I-Lucas2-05 The comment requests clarification of Mitigation Measure 5.4.1b for vegetation removal presented on page 1-45, and how it mitigates for loss of habitat. See Response O-CNPS2-23 for a response to this issue.

I-Lucas2-06 The comment states that the Draft EIR does not establish how much of Observation Hill and Hill 1000 will be removed, and asks if excavation at these locations would cause loss of grassland habitat and impacts on callippe silverspot butterfly. See Response O-CNPS2-10 for a discussion of this issue.

I-Lucas2-07 The comment asks whether instability or erosion levels of Observation Hill and Hill 1000, which would be excavated for a new spillway, would be exacerbated during storm events. See Response O-CNPS2-11 for a discussion of this issue.

I-Lucas2-08 The comment asks if flight paths of migratory birds would be affected by alteration of Observation Hill and Hill 1000, and asks if changes in landscape would affect eagles, waterfowl, and butterflies. See Response O-CNPS2-12 for a discussion of this issue. See also Response I-Lucas1-01.

I-Lucas2-09 The comment asks whether there are alternatives to excavating Observation Hill and Hill 1000, where the proposed spillway would be located. See Response O-CNPS2-13 for a discussion of this issue.

I-Lucas2-10 The comment expresses the desire to collect seeds or salvage special status plants that would be affected by the CDRP. See Response O-CNPS2-24 for a discussion of this issue.

I-Lucas2-11 The comment expresses the opinion that preventative measures should be taken to relocate sensitive species before construction. The comment observes that the U.S. Navy saved western pond turtles at Moffett Field using this strategy. See Response O-CNPS2-25 for a discussion of this issue.

I-Lucas2-12 The comment states that seasonal wetlands will be lost when the reservoir returns to elevation 756 feet and asks where mitigation areas for this type of wetland can be found. The comment further states that mitigation for the inundation of Calaveras Creek should be provided as linear feet of wetlands, hopefully in areas where the wildlife corridor can be continued, in the south end of Calaveras Reservoir near the Calaveras Test Site, and at the north end of the Reservoir. See Response O-CNPS2-18 for a discussion of this issue.

11.3.18 MARK LYNN, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

I-Lynn-01 The comment states that the Draft EIR does not address the needs of anadromous fish and requests that steelhead and salmon be restored to the creek.

The EIR addresses steelhead recovery on EIR pages 6-23 – 6.32 (Vol. 2, Chapter 6, Section 6.2.3.3).

Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a description of the flow release schedules proposed as part of the CDRP (including flows for steelhead) and information on the analyses that were conducted to assess the flow release schedules, to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for a discussion on fish passage issues, and to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion on cumulative impacts on steelhead and information on monitoring and adaptive management for steelhead. Please also refer to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for a discussion of Chinook and coho salmon in Alameda Creek.

As indicated in the preface to this response, the SFPUC developed a variant of the project that includes revised instream flow schedules for Alameda and Calaveras Creeks, installation of a fish screen at the upstream end of the diversion tunnel at the ACDD, a fish ladder at the ACDD, and long-term implementation of an Adaptive Management Implementation Plan for Central California Coast steelhead as part of an overall management strategy to support and monitor steelhead in the southern Alameda Creek watershed. Refer to Chapter 9, Project Variant, for a description and analysis of the CDRP Variant.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 40 – 42.

11.3.19 ROBERT MEANS, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

I-Means-01 The comment states that humans have disrupted the natural balance. The comment further states that the project's fisheries restoration is weak and asks that the project provide enough water to restore fisheries.

Please refer to the master response in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a discussion of the proposed flow schedules; Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for a discussion of flow effects on fishery habitat; and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of cumulative impacts on steelhead.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, page 44.

11.3.20 SARA MEGHROUNI, 11/12/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

I-Meghrouni-01 The comment states that the project objectives include nothing about the native fish and wildlife, and asks that the project be compatible with restoration of native fish and wildlife.

Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.3, Native Fish Restoration as one of the Project Purposes and Goals, for responses to the comment regarding inclusion of restoration of native fish and wildlife as part of the project purpose.

Regarding restoration of wildlife, the EIR discusses mitigation of project impacts on wildlife in Chapter 5, Section 5.4, on EIR pages 5-2 – 5-14. Several types of mitigation are discussed in that section, including Avoidance and Minimization Measures (Mitigation Measure 5.4.1), Habitat Restoration Measures (Mitigation Measure 5.4.2), and Compensation Measures (Mitigation Measure 5.4.3). Please refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion on restoration of steelhead in Alameda Creek.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 20 – 21.

11.3.21 DAN REAZER, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Reazer-01 The comment expresses interest in the amount of fish restoration occurring in the western United States, and surprise that no other comments request removing the dam, referring to projects on the Klamath and Columbia Rivers. The commenter does not want the Calaveras Dam to be removed, and appreciates SFPUC water.

The commenter's interest is acknowledged. Please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for a discussion of fish passage issues, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of flow schedules for steelhead, both of which address fish restoration. Removal of Calaveras Dam is discussed on EIR pages 7-76 – 7-77 (Vol. 2, Chapter 7, Section 7.10.1) in "Alternative Locations for Water Storage," one of the alternatives considered and rejected.

I-Reazer-02 The comment expresses the opinion that the Draft EIR does not, and should, consider the history of the fisheries in Alameda Creek. The comment further states that the SFPUC should restore steelhead and salmon to Alameda Creek, as well as other creeks in the region, and expresses the opinion that the project should allow the steelhead population to move out of Arroyo Hondo and Calaveras Reservoir.

EIR Section 4.5.1 (Vol. 1, Section 4.5), the setting section for Fisheries and Aquatic Habitat, provides a comprehensive description of the aquatic habitats in the study area, including pertinent history of the fisheries in the Alameda Creek watershed. Please also refer to the master response presented in Section 10.2, Baseline Used in the Environmental Analysis, and specifically to

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 38 – 40.

Section 10.2.2, Use of Appropriate Baselines, and the subsection entitled "Baseline for Project-Specific Impacts" for a discussion of baselines for different resources areas. Refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a description of the flow release schedules proposed as part of the CDRP (including flows for steelhead), information on the analyses that were conducted to assess the flow release schedules, and information on monitoring and adaptive management for steelhead. Also refer to Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for a discussion of Chinook and coho salmon in Alameda Creek.

As indicated in the preface to this response, the SFPUC developed a variant of the project that includes revised instream flow schedules for Alameda and Calaveras Creeks, installation of a fish screen at the upstream end of the diversion tunnel at the ACDD, a fish ladder at the ACDD, and long-term implementation of an Adaptive Management Implementation Plan for Central California Coast steelhead as part of an overall management strategy to support and monitor steelhead in the southern Alameda Creek watershed. Refer to Chapter 9, Project Variant, for a description and analysis of the CDRP Variant.

I-Reazer-03 The comment states that the Draft EIR does not address federal, state and local flow requirements. The comment also asks if a recreational fishing system could be established that could recoup revenue lost by increasing flow.

Regarding flow requirements, please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed As Part of the Draft EIR Project and CDRP Variant, and 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam. Regarding compliance with the federal Endangered Species Act with respect to adequate streamflows for steelhead, please refer to Response A-NMFS-01 and the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead regarding consultation and coordination with federal agencies.

Regarding establishing a recreational fishing system, the fisheries resources of Alameda Creek and Calaveras Creeks and Arroyo Hondo and Calaveras Reservoir are natural resources under the jurisdiction of the California Department of Fish and Game, which establishes and implements regulations for the use of these natural resources. As described in EIR Section 4.3, Land Use, Agricultural Resources, and Recreation (Vol. 1, Chapter 4), the SFPUC restricts access to its lands within the City and County of San Francisco-owned Alameda watershed in order to maintain and improve source water quality to protect public health and safety. Public use of these lands is strictly limited, and fishing is specifically prohibited.

I-Reazer-04 The comment asks that fish passage facilities be installed on the new Calaveras Dam.

Please refer to master response 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and to the subsection entitled "Fish Passage at Calaveras Dam."

I-Reazer-05 The comment asks that the project take the lead on restoring anadromous fish.

Please refer to master response 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a description of the flow release schedules proposed as part of the CDRP, information on the analyses that were conducted to assess the flow release schedules, and information on monitoring and adaptive management for steelhead, and to Sections 10.4.6, Other Anadromous Fish Species in Alameda Creek for a discussion of other anadromous fish in Alameda Creek.

11.3.22 MATT RICHARDSON, 11/12/09[1]

Note to Reader:	After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.
I-Richardson-01	The comment indicates that the commenter conserves water. This comment does not address the accuracy or adequacy of the EIR; however, please see Response A-ACPWA-12 for a description of the SFPUC's conservation program and recycling and groundwater projects being conducted as part of its Water System Improvement Program (WSIP).
I-Richardson-02	The comment notes other California rivers where plans are underway to provide flows supporting migratory fish, and asks that the project provide access and adequate flows for migratory fish as requested by the National Marine Fisheries Service (NMFS) and be mindful of the Endangered Species Act. The commenter believes that minimum flows for fish can be provided without affecting water usage. Please refer to the master response presented in Section 10.4 Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of ACDD and Calaveras Dam, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for descriptions of flows for migratory fish, fish passage, and consultation with NMFS. Implementation of the CDRP Variant described in Chapter 9 would include proposed instream flow schedules for Alameda and Calaveras Creeks, construction of a fish ladder at the Alameda Creek Diversion Dam (ACDD), and installation of fish screens at the ACDD and Calaveras Reservoir. These fishery enhancements were developed in close coordination with the NMFS and the California Department of Fish and Game. Please refer to Chapter 9 for a description and analysis of the CDRP Variant. See also Responses A-NMFS-01, A-NMFS-04, and A-SFBOS-Daly-05.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 33 – 35.

The federal Endangered Species Act is described on EIR pages 4.4-61 – 4.4-62 and the California Endangered Species Act is described on EIR pages 4.4-65 – 4.4-66 (Vol. 1, Chapter 4, Section 4.4.1.3). Wildlife in the project study area that are listed under the state or federal Endangered Species Act — Callippe silverspot butterfly, California tiger salamander, California red-legged frog, Alameda whipsnake, and bald eagle — are described on EIR pages 4.4-22 – 4.4-53. Impacts on these species are identified and discussed in Impacts 4.4-2 through 4.4-6 on EIR pages 4.4-84 – 4.4-102. Special status fish species are discussed on EIR pages 4.5-36 – 4.5-45 (Vol. 1, Chapter 4, Section 4.5.1.2) and impacts are identified and discussed in Section 4.5.2.3. Mitigation measures to reduce impacts on special status species are listed in EIR Chapter 5 in Sections 5.4 and 5.5.

I-Richardson-03 The comment indicates that the commenter supports water conservation.

This comment does not address the accuracy or adequacy of the EIR; however, please see Response A-ACPWA-12 for a description of the SFPUC's current and planned conservation program and the recycling and groundwater projects that are being conducted as part of its WSIP.

11.3.23 MARY JEAN ROBERTSON, OHLONE PROFILES PROJECT, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Robertson-01 The comment expresses concern about the quality of the habitat for salmon and the effects of pollutants such as mercury on salmon migration.

Water quality in Calaveras Reservoir, Alameda Creek, and Calaveras Creek is discussed on EIR pages 4.7-3 – 4.7-16 (Vol. 2, Chapter 4, Section 4.7.1.1). Mercury is not commonly found in the geologic formations in contact with water in the reservoir; other metals and related potential water quality impacts from the project are discussed in Impacts 4.7.2 and 4.7.4 (see EIR pages 4.7-44 – 4.7-55 and 4.7-57 – 4.7-60). As noted on EIR page 4.7-4, the SFPUC restricts public access to the watershed to preserve water quality, and there are few residences or other development in the vicinity of the portion of the Alameda Creek watershed that is the source of water in the reservoir. Therefore, water quality in the watershed and reservoir is excellent and generally meets applicable water quality objectives. Fish communities and aquatic habitat are discussed on EIR pages 4.5-10 – 4.5-35 (Vol. 1, Chapter 4, Section 4.5.1.1), and steelhead and rainbow trout are discussed more specifically on EIR pages 4.5-36 – 4.5-45.

Impacts on water quality during construction of the proposed project are discussed on EIR pages 4.7-22 – 4.7-57, and mitigation measures that would reduce water quality impacts to less-than-significant levels are found on EIR pages 5-18 – 5-26 (Vol. 2, Chapter 5, Section 5.7). Temporary impacts on fish resulting from construction activities are discussed on EIR pages 4.5-57 – 4.5-60; implementation of Mitigation Measure 5.7.1, including site-specific best management practices and a Stormwater Pollution Prevention Plan, would reduce construction impacts on water quality and fisheries to less-than-significant levels.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 20 – 21.

I-Robertson-02 The comment notes that there were people living in the region and in the project area for 5,000 years, and that the habitat was enhanced by their activities.

The comment is acknowledged. EIR pages 4.10-6 – 4.10- 8 (Vol. 2, Chapter 4, Section 4.10.1.2) discuss the prehistoric archaeological setting, including the presence of Native Americans in the vicinity of the project site at least 5,000 years before the present time. As this is not a comment on the accuracy or adequacy of the EIR, and no further response is required.

11.3.24 JEFF ROY, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Roy-01 The comment asks whether water flows are federally mandated.

At present, the amount of water released from Calaveras Reservoir by the SFPUC is not directly controlled by any federal agency. Please refer to Response A-NMFS-01 for a discussion of consultation with the National Marine Fisheries Service (NMFS) and coordination with the U.S. Army Corps of Engineers related to permitting for the proposed project. Information on federal laws and regulations pertaining to the proposed project related to stream flows and the federal Endangered Species Act is provided in EIR Sections 4.4.1.3, 4.5.1.3, and 4.6.1.2 in the "Regulatory Framework" subsections (Vol. 1, Chapter 4). Please also refer to the master response in Section 10.4, Fisheries, and specifically to Sections 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a discussion of the flow release schedule established in the 1997 Memorandum of Understanding with the California Department of Fish and Game (CDFG) and the proposed flow schedules developed in 2010 in coordination with NMFS and CDFG. Please refer to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, in that master response for responses to comments related to consultation with NMFS. Permit conditions may specify flows to be released in the future for fish habitat and fish passage; please see Chapter 9 for a description of the CDRP Variant and proposed flow schedules resulting from consultation with NMFS subsequent to the publication of the Draft EIR.

I-Roy-02 The comment refers to potential flooding in the Sunol Valley and Fremont and notes that, at the time the comment was made, Calaveras Reservoir was only 40 percent full.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 33 – 34.

Calaveras Reservoir is a single-purpose water supply reservoir. While the reservoir was not built with flood control in mind, it provides incidental flood control benefits. At the beginning of the rainy season, the reservoir is typically drawn down as a result of providing water supply to the regional system through the summer dry season; consequently, the reservoir has considerable capacity to accommodate flood water from the watershed. As the SFPUC fills the reservoir during the rainy months, the amount of incidental flood storage capacity declines. However, even when the reservoir is full or close to full, it provides flood control benefits in all but the very largest of storms. This is because the SFPUC is often able to delay release of water from the reservoir until the peak of a storm has passed and flow from other parts of the Alameda Creek watershed has declined. Also, when more water is entering the reservoir than can be accommodated within the reservoir, the SFPUC typically releases water from the cone valve at the dam rather than allowing it to pass over the spillway. This practice reduces downstream peak flows in many storms, although occasionally uncontrolled spills over the spillway occur.

Since 2001, when the Division of Safety of Dams imposed restrictions on storage in Calaveras Reservoir, the SFPUC has kept the water level in the reservoir much lower than it did before 2001. This practice has increased the amount of incidental flood storage and incidental flood control benefit that the reservoir provides. When the CDRP is complete, the amount of incidental flood control benefit that the reservoir provides would return to its pre-2001 level.

I-Roy-03 The comment states that many workers are unemployed and supports beginning the project.

The comment is acknowledged. As the comment does not address the accuracy or adequacy of the EIR, no further response is required.

11.3.25 ROBERT SALKOW, 11/03/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

I-Salkow-01 The comment summarizes the progress made in steelhead recovery efforts in the Alameda Creek watershed, and the commenter states that the SFPUC released a flawed draft environmental impact report for the Calaveras Dam replacement that will not restore a sustainable run of steelhead below the dam, that migratory fish below the reservoir will not receive adequate stream flow, and that the proposal fails to mitigate construction-related damage to endangered species habitat.

The commenter has expressed an opinion about the inadequacy of the EIR without providing any supporting evidence or analysis. The EIR analysis and conclusions are supported by substantial evidence presented in EIR and in background documents which are part of the EIR record.

EIR pages 6-23 – 6-32 (Vol. 2, Chapter 6, Section 6.2.3.3) and Appendix J (Vol. 3) provide detailed analyses of the proposed project, including flow schedules, in relation to potential impacts on steelhead, consistent with the requirements of the California Environmental Quality Act. In addition, please refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for additional discussion on streamflows for migratory fish.

Mitigation measures that would reduce impacts during construction are listed in EIR Volume 2, Chapter 5. There are construction-related mitigation measures in the areas of recreation (EIR page 5-1), vegetation and wildlife (EIR pages 5-2 – 5-13), fisheries and aquatic habitat (EIR page 5-16), water quality (EIR pages 5-18 – 5-26), geology (EIR page 5-27), hazards and hazardous materials (EIR pages 5-27 – 5-32), cultural resources (EIR pages 5-32 – 5-37), transportation (EIR pages 5-37 – 5-38), air quality (EIR pages 5-38 – 5-40), and noise (EIR pages 5-40 – 5-42). The comment does not provide any specifics as to the inadequacy of mitigation measures; therefore, no additional response is necessary. In addition, please see Section 10.4.4, Construction-Related Effects on Calaveras Creek and Calaveras Reservoir, for further discussion on construction-related effects on fish and aquatic habitat.

As indicated in the preface to these responses, the SFPUC has developed the CDRP Variant, which includes enhancements to fishery resources and other refinements to the project analyzed in the Draft EIR. As described in Chapter 9, the CDRP Variant was developed as a result of the SFPUC's ongoing coordination with resource agencies and its own project development and design process. The Variant includes proposed instream flow schedules for Alameda and Calaveras Creeks, installation of a fish screen at the upstream end of the diversion tunnel at the Alameda Creek Diversion Dam (ACDD) and a fish ladder at the ACDD, installation of fish screens at Calaveras Dam Adits #1 and #2, and long-term implementation of an Adaptive Management Implementation Plan for Central California Coast steelhead as part of an overall management strategy to support and monitor steelhead in the southern Alameda Creek watershed.

11.3.26 RICHARD SANDERELL, VISIONS OF THE FUTURE ENVIRONMENT, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Sanderell-01 The comment states that many California rivers no longer support fishing, and the commenter is in favor of providing enough water to support fish returning to the Alameda Creek watershed.

The comment does not address the adequacy or accuracy of the EIR. Nevertheless, EIR pages 3-63 – 3-70 (Vol. 1, Chapter 3, Sections 3.6.5 and 3.6.6) describe proposed project operations, including proposed flow schedules for fish and other aquatic species, and EIR Section 4.5, Fisheries and Aquatic Habitat, provides a detailed description of existing conditions of fishery resources in the Alameda Creek watershed and potential impacts of the Draft EIR project. EIR pages 6-23 – 6-32 (Vol. 2, Chapter 6, Section 6.2.3.3) and Appendix J (Vol. 3) analyze potential project impacts on steelhead. Please also refer to the master response in Section 10.4, Fisheries, and specifically to Section 10.4.3, Native Fish Restoration as One of the Project Purposes and Goals, regarding fish restoration as a project objective, and to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of flow schedules to support restoration of steelhead habitat.

I-Sanderell-02 The comment supports restoring waterways for fish and expresses concern about using hatcheries to produce fish for human consumption.

See Response I-Sanderell-01 for a response to flow schedules to support steelhead in the future. The comment regarding fish hatcheries is acknowledged. The project does not include use of hatchery fish in any way. This comment does not relate to the accuracy or adequacy of the EIR; therefore, no further response is required.

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 42 – 44.

11.3.27 GARY SARGENT, 12/14/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR Project and the CDRP Variant.

I-Sargent-01 The commenter notes that there was formerly an active salmon fishing industry out of San Francisco Bay, but there has been no salmon fishing on the west coast south of Alaska for the last two years. This economic situation reflects an ecological situation.

This comment is acknowledged. As it does not address the adequacy or accuracy of the EIR, no further response is required.

I-Sargent-02 The comment asks that a way be found to provide decent flows for steelhead so they can return to Alameda Creek, which is the best opportunity to restore salmon runs in the Bay Area. The comment requests that the SFPUC not proceed with the flawed EIR.

Please refer to the master response provided in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of flow schedules for steelhead.

The commenter has expressed an opinion about the inadequacy of the EIR without providing any supporting evidence or analysis. The EIR analysis and conclusions are supported by substantial evidence presented in EIR and in background documents which are part of the EIR record.

I-Sargent-03 The commenter expresses support for the dam and states that the project should be in compliance with applicable state and federal laws.

The comment in support of the dam is acknowledged. Compliance with applicable state and federal laws is discussed on EIR pages 3-70 – 3-74 (Vol. 1, Chapter 3, Section 3.7), and in the Regulatory Framework subsection for each individual topic discussed in Chapter 4, Environmental Setting and Impacts (Vol. 1 and Vol.2).

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[1] Comment provided at the public hearing held at Sunol Glen Elementary School, December 14, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 45 – 47.

11.3.28 TIM STARBIRD, 11/10/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

I-Starbird-01 The comment raises concerns regarding closure of Calaveras Road south of the dam being near the commenter's house and identifies a suggested road closure location to the north. The commenter also notes that there has been gunfire in the area and raises safety concerns about the closure being so close to his residence.

Regarding closure of Calaveras Road, as indicated in Mitigation Measure 5.12.4b (on EIR page 5-38,Vol. 2, Chapter 5, Section 5.12), the SFPUC would seek approval from Santa Clara County for either (1) closing Calaveras Road between the dam site and Felter Road to through traffic on weekdays, Monday through Friday, except emergency vehicles, to avoid creating a 7-mile-long dead end with no outlet; or (2) constructing a turnaround at the dam site and installing signage at Felter Road advising that there is no outlet 7 miles up the road due to construction. In either case, access to private homes would be maintained.

Should Santa Clara County grant approval for closure of Calaveras Road from the county line south to Felter Road (EIR Figure 3.13), the SFPUC recommends closure of the entire road in the interest of public safety. If closure of Calaveras Road occurs at Felter Road, this would prevent vehicles from entering Calaveras Road and parking in the section between Felter Road and the Alameda County line, which would eliminate the potential for people to stop or park along this portion of Calaveras Road. Alternatively, the closure point could be moved further to the north at an appropriate and safe turnout location farther away from the houses at the intersection of Calaveras and Felter Roads, to minimize the potential disturbances to residents.

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[1] Comment provided at the public hearing held at Fremont Main Library, November 10, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 22 – 24.

If closure of Calaveras Road occurs at the dam site, there would be no change in public access near commenter's residence, and it is unlikely to increase the type of disturbances described by the commenter. The SFPUC has indicated that it will work with the property owners and Santa Clara County staff to identify a possible location for the road closure.

11.3.29 KEVAN URQUHART, CERTIFIED FISHERIES PROFESSIONAL – AMERICAN FISHERIES SOCIETY, AND MEMBER OF THE AMERICAN INSTITUTE OF FISHERY RESEARCH BIOLOGISTS, SUPPORTING ALAMEDA CREEK ALLIANCE AND THE CENTER FOR BIOLOGICAL DIVERSITY, 12/21/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following responses apply to both the Draft EIR project and the CDRP Variant.

I-Urquhart-01 The commenter states his concurrence with the technical comments submitted by the Alameda Creek Alliance/Center for Biological Diversity on Chapters 4.5 and 4.6 in the Draft EIR.

Please refer to the responses to the letters in Section 11.2.4 (O-ACA&CBD1) and Section 11.2.5 (O-ACA&CBD2) of this Comments and Responses document.

I-Urquhart-02 The comment states that the Draft EIR incorrectly assumes that current operations of the Alameda Creek Diversion Dam (ACDD) do not affect the resident rainbow trout populations in Alameda Creek. The comment also states that the ACDD diversion of 650 cubic feet per second (cfs) exceeds the natural outflow of upper Alameda Creek above the ACDD for most of the year and that no flows are released downstream except during the annual sediment sluicing, resulting in entrainment of juvenile rainbow trout. The trout that are entrained in the diversion tunnel are permanently lost into Calaveras Reservoir.

EIR Sections 4.5 and 4.6 (Vol. 1, Chapter 4); Sections 6.2.3.2 and 6.2.3.3 (Vol. 2, Chapter 6); and Appendix J (Vol. 3) discuss current operations of the ACDD and diversion tunnel and acknowledge the past, present, and ongoing effects of these facilities on streamflow, aquatic habitat, and the fish community (including rainbow trout). As required under the California Environmental Quality Act, the EIR presents the current operations and existing conditions as the baseline to be used to analyze project effects (see the master response presented in Section 10.2, Baseline Used in the Environmental Analysis, for further discussion). Therefore, the EIR does not incorrectly assume the effects of current ACDD operations on resident trout; rather, the EIR correctly describes the existing conditions.

As discussed in Sections 4.5 and 4.6 of the EIR (Vol. 1), variable (frequency and duration) diversions of up to 650 cfs have historically been made at the ACDD with no minimum bypasses under the existing condition. Diversions of the full 650 cfs (current capacity of the diversion tunnel) only occur during high-flow periods when streamflows upstream of the ACDD have increased due to precipitation events. As presented in the EIR, there have also been several periods where the diversion gates at the ACDD have been closed (see Figure 4.5.3: Daily Flows in Alameda Creek and Diversions at the ACDD During DSOD Restricted Conditions, and the associated discussion) and all flows were passed over the diversion dam—contrary to the comment's assertion that no flows are released downstream except during annual sediment sluicing. Under both the Draft EIR project and CDRP Variant, the SFPUC would implement minimum bypass flows at all times when water is naturally present upstream of the ACDD. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and CDRP Variant, for a discussion on flows.

As noted in the comment, bypasses have also occurred under the existing condition during sluicing procedures, and this would continue under future project conditions. However, as described in Chapter 9, the frequency of sluicing would increase under the CDRP Variant, while under the Draft EIR project the frequency of sluicing would remain the same as the existing condition.

Fish entrainment in the diversion tunnel is discussed on EIR pages 4.5-66 – 4.5-70 (Vol. 1, Chapter 4, Impact 4.5.5). Please also refer to the master response in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for additional analysis of fish entrainment in the subsection entitled "Flow-Related Effects on Fish and Habitat Conditions."

Also, since publication of the Draft EIR, the SFPUC has made refinements in to the project (and has incorporated them into the CDRP Variant) as a result of its ongoing coordination with resource agencies and its own project development and design process. Among the project refinements are several fishery enhancements, including revised flow schedules, construction of a fish ladder at the ACDD, and installation of fish screens at the ACDD and Calaveras Reservoir. Please see Chapter 9 for a description and analysis of these and other project refinements.

I-Urquhart-03 The comment states that the EIR needs to better evaluate flows needed for passage and spawning by adult steelhead and rearing of juvenile steelhead between the BART weir and the ACDD, Calaveras Reservoir, and San Antonio Reservoir because there is inadequate information to determine whether all life stages have adequate flows in the extended study area.

The EIR evaluates future conditions assuming downstream barriers to steelhead migration, including the BART weir, have been removed (see Vol. 2, Chapter 6, Section 6.3.3, pages 6-24 – 6-32). The EIR assumes that the presence of steelhead in Alameda Creek above the existing barriers is possible in the future, and that steelhead could be affected by construction and/or operation of the proposed project. As noted on EIR pages 6-29 – 6-30, implementation of the Draft EIR project would improve conditions for steelhead in the watershed, and would support spawning, egg incubation, and rearing, while the project's effect on flows for migrating steelhead is less certain and monitoring of conditions is necessary when future populations of steelhead are re-introduced to the watershed.

Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as Part of the Draft EIR Project and Variant, and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for a discussion of flows for steelhead as part of the cumulative impact analysis in the EIR.

Also, as noted above, since publication of the Draft EIR, the SFPUC has made refinements to the project (and incorporated them into the CDRP Variant) as a result of its ongoing coordination with resource agencies and its own project development and design process. Among the project refinements are several fishery enhancements including revised flow schedules, construction of a fish ladder at the ACDD, and installation of fish screens at the ACDD and Calaveras Reservoir. Please see Chapter 9 for a description and analysis of these and other project refinements.

I-Urquhart-04 The comment states that the Draft EIR fails to evaluate the ongoing and cumulative impacts on habitat from impeded sediment transport and lack of woody debris associated with operating the ACDD, Calaveras Reservoir, and San Antonio Reservoir.

The effects of ongoing operations of the facilities mentioned are considered in the cumulative impact analysis in the EIR in accordance with CEQA Guidelines Section 15064 (h) (1), which states that "'Cumulatively considerable' means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." The fact that past projects have had a considerable adverse effect on Alameda Creek and its natural resources is reflected in the EIR in the "Setting" discussions in Section 4.5, Fisheries, and Section 4.6, Hydrology (Vol. 1, Chapter 4, Sections 4.5.1.1 and 4.6.1.1), and was considered in reaching conclusions regarding cumulative fisheries and hydrology (including geomorphology) impacts on EIR pages 6-23 – 6-32 and 6-32 – 6-35 (Vol. 2, Chapter 6, Sections 6.2.3.3 and 6.2.3.4).

Please also refer to the discussions in the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.4, Geomorphology, Sediment Transport, and Channel Formation, for further discussion of the project's effects on sediment transport; and to the master response in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for further discussion of cumulative impacts on steelhead habitat.

I-Urquhart-05 The comment states that the EIR should fully elucidate the proportion of unimpaired flows that would have been historically generated in lower Alameda Creek in order to define the SFPUC's proportional responsibility for bypass flows to sustain the aquatic habitat in Alameda Creek below its confluence with Arroyo de la Laguna. The comment also indicates the need to comply with Fish and Game Code 5937.

As described on EIR pages 3-66 – 3-70 (Vol. 1, Chapter 3, Sections 3.6.5 and 3.6.6), under the Draft EIR project, the SFPUC would maintain certain specified flows in Alameda Creek below its confluence with Calaveras Creek consistent with the proposed flow schedules. EIR pages 4.6-94 – 4.6-98 (Vol. 1, Chapter 4, Section 4.6, Impact 4.6.7) contain a description of the CDRP's estimated proportional effects on flow in Alameda Creek below the Arroyo de la Laguna confluence, and conclude that the project would not result in flows outside the range historically experienced in lower Alameda Creek.

For additional information, please refer to the master response presented in Section 10.3, Hydrology, and specifically to Section 10.3.3, Diversions and Streamflow, and to the subsection entitled "Flow in Alameda Creek Downstream of the Arroyo de la Laguna," for discussion of the project's impacts flow in lower Alameda Creek; and to the master response in Section 10.4, Fisheries, and specifically to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for discussion of impacts on aquatic habitat.

As indicated in Section 2.3 (Vol. 1, Chapter 2, page 2-8), the purpose of the EIR is to disclose the environmental impacts that could result from implementation of the CDRP pursuant to the requirements of the California Environmental Quality Act, and not "to define the proportional responsibility of the SFPUC for bypass flow releases to sustain aquatic habitat below the confluence with the Arroyo de la Laguna." The SFPUC is currently engaged in numerous activities related to fishery protection and restoration, including activities being conducted as part of its watershed management operations, instream flow releases and monitoring programs, and participation in the Alameda Creek Fisheries Restoration Workgroup. Please see Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, and to the subsection entitled "SFPUC Water Enterprise Environmental Stewardship Policy and Alameda Creek Fisheries Restoration Workgroup," regarding collaborative efforts on flow studies focused on steelhead restoration.

With regard to Fish and Game Code 5937, please refer Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, and to the subsection entitled "Compliance with the Fish and Game Code."

I-Urquhart-06 The comment states that Chapter 4.6 of the Draft EIR is a technical analysis that must be prepared by a Certified Hydrologist and that his/her registration number and name(s) must appear in the report.

The CEQA Guidelines indicate that EIRs need not be prepared only by registered professionals. CEQA Guidelines Section 15149 addresses the use of registered professionals in preparing EIRs. Part (b) of Section 15149 states: "In its intended usage, an EIR is not a technical document that can be prepared only by a registered professional. The EIR serves as a public disclosure document explaining the effects of the proposed project on the environment, alternatives to the project, and ways to minimize adverse effects and to increase beneficial effects."

The preparers of the EIR are listed in Appendix K (Vol. 3). There is no requirement that registrations of EIR preparers be listed in the EIR, although the San Francisco Planning Department has reviewed and approved the qualifications of the environmental consultants who assisted in the preparation of the EIR. Project designs, and technical information used in those designs, are being prepared by registered professionals on the staff of the SFPUC and supporting professional service consulting firms, as required by state statutes.

11.3.30 JAMIE WORKMAN, 11/12/09[1]

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

I-Workman-01 The commenter supports restoration of salmon habitat. In addition, he describes his experience with restoring flows in areas that appeared infeasible. The comment asks that a creative way be found to provide sufficient water to restore salmon habitat.

The commenter's opinion in support of restoration of salmon habitat is acknowledged. Cumulative effects of the proposed project on steelhead are discussed on EIR pages 6-28 – 6-32 (Vol. 2, Chapter 6, Section 6.2.3.3). Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.2, Flows Proposed as part of the Draft EIR Project and the CDRP Variant and Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, regarding proposed flow schedules and information on monitoring and adaptive management, and Section 10.4.6, Other Anadromous Fish Species in Alameda Creek, for a discussion of Chinook and coho salmon in Alameda Creek.

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[1] Comment provided at the public hearing held at San Francisco City Hall, November 12, 2009. See the public hearing transcript in Appendix M of this Comments and Responses document, pages 32 – 33.

11.3.31 KARLA AND CURTIS WERNING, MEMBERS, ALAMEDA CREEK ALLIANCE, 12/14/09

Note to Reader: After the Draft EIR was published, the SFPUC developed a variant of the project that incorporates additional features to enhance fishery resources and other refinements to the dam replacement project. The CDRP Variant and its potential environmental impacts are described in Chapter 9 of this Comments and Responses document. As described in Chapter 9, the mitigation measures applicable to the CDRP Variant are the same as those for the Draft EIR project, unless otherwise noted. The following response applies to both the Draft EIR Project and the CDRP Variant.

I-Werning-01 The comment states that restoration of fish habitat and sufficient flows for steelhead survival are crucial and barriers to migration must be removed. The comment also expresses concern about the effects of the Alameda Creek Diversion Dam (ACDD) and diversion tunnel on fish.

EIR Impact 4.5.5 (Vol. 1, Chapter 4, Section 4.5, pages 4.5-60 – 4.5-70) discusses the effects of the proposed project on native fish in Alameda Creek downstream of the ACDD. This discussion includes an analysis of the effects of the Draft EIR project operations of the ACDD and diversion tunnel on fish, and notes that currently an unknown number of resident fish are likely washed over the ACDD and/or entrained in the diversion tunnel to Calaveras Reservoir during high-flow conditions when the gates to the tunnel are open. The analysis indicates that while more regular diversions at the ACDD could result in more fish becoming entrained in the diversion tunnel, the numbers of entrained fish would be expected to be relatively low, and because the existing fish populations upstream of the ACDD have sustained themselves over approximately 70 years of regular diversions at the ACDD, this impact would be less than significant. Please also refer to the master response presented in Section 10.4, Fisheries, and specifically to Section 10.4.5, Current and Proposed Operations of the ACDD and Calaveras Dam, for responses to comments regarding impacts on fish habitat and on fish passage at the ACDD and Calaveras Dam, and to Section 10.4.7, Future Cumulative Analysis of Effects on Steelhead, for additional discussion of operational effects of proposed flows on steelhead habitat.

Barriers to fish migration below the ACDD and Calaveras Dam are described on EIR pages 4.5-32 – 4.5-34; these barriers are outside the control of the SFPUC and removal is not part of the proposed project.

Implementation of the CDRP Variant, described in Chapter 9, would include construction of a fish screen at the upstream end of the diversion tunnel at the ACDD, which would prevent future entrainment of fish, and a fish ladder skirting the ACDD, which would provide passage for fish upstream and downstream of the ACDD. Please refer to Chapter 9, Section 9.2.2, subsections entitled “Fish Screen at the Alameda Creek Diversion Tunnel” and “Fish Ladder around the Alameda Creek Diversion Dam” for a description of these fishery enhancements.

12. DRAFT EIR REVISIONS

Chapter 12 presents revisions to the text, tables, and figures of the *Calaveras Dam Replacement Project Draft EIR*, published on October 6, 2009. The first part of this chapter, Section 12.1, provides revisions to the EIR gathered from Chapter 10, Comments and Responses. The second part of the chapter, Section 12.2, lists staff-initiated text changes to correct minor inconsistencies, to add minor information or clarification related to the project, to correct minor errors, and to provide updated information where applicable. Please note that text changes in Sections 12.1 and 12.2 may overlap and apply to the same portions of the EIR; the reader should refer to both sections to understand the full context of EIR revisions. For changes to Table S.2: Summary of Impacts and Mitigation Measures (EIR pages 1-37 to 1-97), the reader can refer to the new Table S.4 (included in Section 12.2) for the complete text of the revisions to the mitigation measures as they apply to the CDRP Variant. These corrections do not change the analysis and conclusions presented in the Draft EIR. Within each section, revisions are listed in sequential order by volume/chapter/section (for Chapter 4)/page of the Draft EIR. Deletions in text and tables are shown in ~~strike through~~ and new text is shown in underline. Figures and tables are noted as "[New]" or "[Revised]." In addition to the revisions shown below, other minor changes are made to the Draft EIR to correct typographical errors.

See also Chapter 9 which describes and analyzes the CDRP Variant.

The text changes shown in Chapter 12 apply to the Draft EIR project, as presented in Chapters 2 through 7 of the EIR. In some cases, as described in Chapter 9, the description and analysis of the CDRP Variant rely on those of the Draft EIR project. Hence, insofar as the portions of the Draft EIR project and analysis affected by Chapter 12 also apply to the Variant, the revisions in Chapter 12 also apply to the Variant. In general, however, the description and analysis of the Variant in Chapter 9 incorporates the revisions presented in this chapter. Chapter 12 also includes text revisions to Chapter 1 of the Draft EIR, Executive Summary, to incorporate the description and analysis of the CDRP Variant into the EIR.

12.1 CHANGES IN RESPONSES TO COMMENTS

VOLUME 1

Chapter 1, Executive Summary

The fourth bullet on EIR page 1-5 is revised as follows:

- Dry year transfer from Modesto and/or Turlock Irrigation Districts of about 2 mgd coupled with the ~~Westside Groundwater Basin conjunctive use~~ Regional Groundwater Storage and Recovery project to meet the drought year goal of limiting rationing to no more than 20 percent on a system-wide basis.

The following text is added to Section 1.4.5.3 on EIR page 1-26 before the bullet "Bay Area Air Quality Management District" with new text underlined:

California Emergency Management Agency (Cal EMA)

- Approval of Dam Inundation Map and Technical Study

The title of Table S.2: Summary of Impacts and Mitigation Measures, on EIR page 1-37 is revised as follows with new text underlined:

Table S.2: Summary of Impacts and Mitigation Measures (Revised)

Mitigation Measure 5.3.6 in Table S.2: Summary of Impacts and Mitigation Measures under Impact 4.3.6 on EIR page 1-37 is revised as follows with new text underlined and deleted text in ~~strikethrough~~:

4.3.6	Impact of construction activities on established recreational uses in the vicinity of the proposed project site.	**S**	**5.3.6 AMGEN and Primavera Bicycling Tours ~~of California~~** The San Francisco Public Utilities Commission (SFPUC) shall coordinate with the organizers of the AMGEN Tour of California bicycle tour and the Fremont Freewheelers Bicycle Club Primavera bicycle tour to ensure that temporary road closures, haul truck traffic, and other activities related to project construction will not interfere with these tours. Construction activities may be temporarily suspended as needed to prevent conflicts with the AMGEN and Primavera bicycle tours. See also Transportation and Circulation Mitigation Measure 5.12.4a, Hazards and Hazardous Materials Mitigation Measure 5.9.2a, and Air Quality Mitigation Measure 5.13.1a.	**LSM**

The third bullet and the ninth bullet under Mitigation Measure 5.4.1a, Pre-Construction Measures, in Table S.2: Summary of Impacts and Mitigation Measures under 4.4 Vegetation and Wildlife, Impact 4.4.1 on EIR pages 1-38 – 1-39 and EIR pages 1-42 – 1-43 are revised as follows with new text underlined and deleted text in ~~strikethrough~~:

4.4 Vegetation and Wildlife				
4.4.1	Effect of CDRP on wetlands and other aquatic habitats.	Construction: **S** Filling: **S** Operation: **LS**	**5.4.1 Avoidance and Minimization Measures** The SFPUC and its contractors shall implement the following measures to avoid and minimize potential impacts of the proposed project on special status species and sensitive habitats. These measures apply to both on-site construction and off-site mitigation areas. **5.4.1a Pre-Construction Measures** • **Worker Education Program.** A worker education program shall be implemented to familiarize workers, including all vehicle operators, of the importance of avoidance of harm to special-status species and sensitive natural communities. The training shall include a discussion of the importance of maintaining	**LSM** **LSM** **LS**

			speed limits, appropriate disposing of trash and waste materials, and respecting exclusion zones. The SFPUC and its construction contractor shall confirm that all workers have been trained appropriately. • **Other Tree- or Cliff-Nesting Raptor Pre-construction Survey.** A survey to identify active nests for tree- or cliff-nesting raptors (~~other than~~ including bald eagles) will be conducted by a qualified biologist no more than 2 weeks before the start of construction at project sites from February 1 through July 30. Active raptor nests located within 500 feet (0.25 mile for golden eagle and bald eagle or falcons) of the project will be mapped, to the extent allowed by access. If an active bald eagle nest is found, implement nest protection measures described previously for bald eagles. If an active raptor nest is found within 500 feet (0.25 mile for golden eagle or falcons) of the project, a determination will be made by a qualified biologist, in coordination with the CDFG, as to whether or not construction work will affect the active nest or disrupt reproductive behavior. Criteria used for this evaluation will include, but not be limited to, presence of visual screening between the nest and construction activities, and behavior of adult raptors in response to the surveyors or other ambient human activity. Alternatively, other appropriate avoidance measures, as approved by CDFG may be implemented to ensure that the nest is protected. If it is determined that construction will not affect an active nest or disrupt breeding behavior, construction will proceed without any restriction or mitigation measure. If it is determined that construction will affect an active raptor nest or disrupt reproductive behavior, then avoidance is the only mitigation available. Construction will be delayed within 300 feet (0.25 mile for golden eagle or falcons) of such a nest until a qualified biologist determines that the subject raptors are not nesting. In coordination with CDFG, trees with unoccupied raptor nests (excluding golden and bald eagle) may only be removed prior to March 1 or following the determination that subject raptors are not nesting.	

The third, fourth, and fifth bullets under Mitigation Measure 5.4.1b, Construction Measures, in Table S.2: Summary of Impacts and Mitigation Measures under 4.4 Vegetation and Wildlife, Impact 4.4.1, on EIR pages 1-44 – 1-45 are revised as follows with new text underlined and deleted text in ~~strikethrough~~:

4.4.1	Effect of CDRP on wetlands and other aquatic habitats.	Construction: **S** Filling: **S** Operation: **LS**	**5.4.1 Avoidance and Minimization Measures** The SFPUC and its contractors shall implement the following measures to avoid and minimize potential impacts of the proposed project on special status species and sensitive habitats. These measures apply to both on-site construction and off-site mitigation areas. **5.4.1a Pre-Construction Measures** **5.4.1b Construction Measures** • **Wetland Soils and Vegetation.** To minimize the degradation of saturated wetland soils and vegetation where avoidance is not practicable, protective practices such as use of geotextile cushions and other materials (e.g., timber pads, prefabricated equipment pads, thick vegetative slash, geotextile fabric free of plastic monofilament and nylon wire) and/or vehicles with balloon tires will be employed. • **Streams and Drainages.** Stabilize banks of all streams and drainages disturbed during construction, including banks of Alameda and Calaveras Creeks, using a non-vegetative material that will protect the soil from erosion by wind or water initially and break down within a few years (e.g., jute matt). To minimize entrapment of amphibians and snakes, any geotextile fabrics used shall be free of plastic monofilament and nylon wire. If visual evidence of erosion (e.g., rilling or scour) is observed, geotextile mats, excelsior blankets, or other soil stabilization products shall also be used. • **Vegetation Removal.** During construction, immediately remove trees, shrubs, debris, soils, or construction materials that are inadvertently deposited below the ordinary high-water mark of any streams, drainages, ponds, wetlands, riparian areas, and Calaveras Reservoir in a manner that minimizes disturbance of the drainage bed and bank (e.g., manually). Such materials will be ~~set back at least 10 feet from Calaveras Reservoir and from streams, drainages, ponds, wetlands, and riparian areas that are not otherwise directly disturbed by construction~~ placed either in soil stock piles or appropriately managed waste collection containers until the materials can be properly disposed of.	**LSM** **LSM** **LS**

Mitigation Measure 5.4.2a, Habitat Restoration Goals and Objectives, in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-47 under Impact 4.4.2: Effect of CDRP on California red-legged frog, is revised as follows with new text underlined and deleted text in ~~strikethrough~~:

4.4.2	Effect of CDRP on California red-legged frog.	Construction: **S** Filling: **S** Operation: **S**	**5.4.2 Habitat Restoration Measures** The SFPUC shall restore the habitat functions and services of areas that are subject to temporary disturbance during project construction. Site restoration shall be undertaken in accordance with a detailed restoration plan or plans prepared by a qualified restoration ecologist and shall be consistent with all required permits. The final habitat restoration plan or plans shall provide, at minimum: **5.4.2a Habitat Restoration Goals and Objectives** Timeframes provided for the following goals and objectives are the goals for meeting success criteria, not for initiating restoration actions. Replanting and grading would begin as soon as practicable but no later than one year following completion of construction. • Restore temporary impacts on wetlands~~,~~ and streams ~~and riparian habitat~~ located above the 756-foot inundation elevation within the reservoir, as well as downstream of the replacement dam and within the limit of work at Calaveras Creek within 3 years of completion of construction. • Restore temporary impacts on annual grasslands within the limit of work located above the 756-foot inundation elevation within 3 years of completion of construction.	**LSM** **LSM** **LSM**

Mitigation Measure 5.4.3a in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-49 under Impact 4.4.3: Effect of CDRP on California tiger salamander, is revised as follows with new text underlined and deleted text in ~~strikethrough~~:

4.4.3	Effect of CDRP on California tiger salamander.	Construction: **S** Filling: **S** Operation: **LS**	**5.4.3a Compensation Goals and Objectives** Timeframes provided for the following goals and objectives are the goals for meeting success criteria, not initiating compensation actions. Replanting and grading would begin as soon as practicable, but no later than one year, following completion of construction. • **California Red-legged Frog Habitat.** Fully compensate for impacts on 0.11 acre and 10,366 linear feet of California red-legged frog aquatic breeding habitat, and fully compensate for any loss of California red-legged frog at the Alameda Creek Diversion Dam (ACDD) and breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek that may result from a potentially increased bullfrog population by improving aquatic breeding habitat through predator control in impaired water bodies in the	**LSM** **LSM** **LS**

			South Calaveras Mitigation Area (SCMA) within 5 years of completion of construction, and by improving breeding habitat conditions in Alameda Creek from the ~~Alameda Creek Diversion Dam~~ ~~(~~ACDD~~)~~ to the Calaveras Creek confluence beginning with the advent of bypass flows; fully compensate for permanent impacts on 2.33 acres and 4,387 linear feet of California red-legged frog aquatic non-breeding and 656 acres of upland habitat within 5 years of completion of construction by restoring, enhancing, and protecting intermittent stream habitat at the South Calaveras and San Antonio Mitigation Areas within 10 years of completion of construction. • **Foothill Yellow-legged Frog Habitat.** Document that project benefits to foothill yellow-legged frog habitat in Alameda Creek from the ACDD to the Calaveras Creek confluence fully compensate for any loss of foothill yellow-legged frog at the ACDD and for the loss of 9,421 linear feet of habitat in Arroyo Hondo, and fully compensate for any loss of breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek that may result from a potentially increased bullfrog population within 5 years of the start of bypass flows at the ACDD.	

Mitigation Measure 5.4.3h in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-52 under Impact 4.4.3: Effect of CDRP on California tiger salamander, is revised as follows with new text underlined and deleted text in ~~strikethrough~~:

4.4.3	Effect of CDRP on California tiger salamander.	Construction: **S** Filling: **S** Operation: **LS**	**5.4.3h Success Criteria** The final compensation plan(s) shall include ecologically based criteria that will be used to determine whether the compensation projects are achieving their objectives. The success criteria shall be ~~based on attributes that are objective and verifiable.~~ assessed by comparing performance during the monitoring period against objective and verifiable, ecologically-based success criteria which reflect the Goals and Objectives of the site. The type of language that will be included in the final MMPs under success criteria are described below. The final success criteria shall provide additional detail and specificity as needed to determine whether compensation objectives are achieved in accordance with resource agency permitting requirements. For example, success criteria may include, but are not limited to these requirements: • Absolute vegetation cover of each established wetland feature shall comprise at least 70 percent by year 5. • Absolute cover of target invasive plant species shall not exceed 5 percent total cover by year 5.	**LSM** **LSM** **LS**

			• Survival of planted oaks shall be at least 30 percent by year 10. • Planted vegetation will be fully established (i.e., not require irrigation and be self sustaining) at the end of the monitoring period.	

Mitigation Measure 5.7.1, Stormwater Pollution Prevention Plan, in Table S.2: Summary of Impacts and Mitigation Measures on EIR pages 1-58 – 1-67 under 4.7 Water Quality, Impact 4.7.1, is revised as follows with new text underlined and deleted text in ~~strikethrough~~:

4.7 Water Quality				
4.7.1	Impact on water bodies as a result of soil erosion and sediment discharge during construction.	S	**5.7.1 Storm Water Pollution Prevention Plan** Consistent with the requirements of the State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities~~Activity~~ (Order 2009-0009-DWQ; adopted on September 2, 2009), the SFPUC shall undertake the proposed project in accordance with a project-specific ~~Storm Water Pollution Prevention Plan (~~SWPPP~~)~~. The San Francisco Bay Regional Water Quality Control Board (RWQCB), the primary agency responsible for protecting water quality within the project area, is responsible for reviewing and ensuring compliance with the SWPPP. This review is based on the general permit issued by the State Water Resources Control Board. The recommended Best Management Practices (BMPs), subject to review and approval by the RWQCB, include the measures listed below. However, the measures themselves may be altered, supplemented, or deleted during the RWQCB's review process, since the RWQCB has final authority over the terms of the SWPPP. **Erosion and Sediment Controls** • Install weed-free fiber rolls, straw-wattles, coir logs, silt fences, or other effective devices along drainage channels to prevent soils from moving into creeks. **Treatment Controls** • An off-site project may be required if an unusual storm event occurs and water discharges have not settled to avoid significant sedimentation from reaching Alameda Creek or its tributaries. All other mitigation measures to protect water quality from stormwater impacts would be implemented before the RWQCB would consider off-site mitigation. Off-site erosion control projects may include gully repairs, stream bank stabilization, slide repairs, or other actions acceptable to the RWQCB. The RWQCB may determine through the permitting process that an off-site erosion control project within the Alameda Watershed	**LSM**

			could be required to offset impacts on water quality. The RWQCB will determine appropriate drainage and runoff treatment controls as part of the SWPPP review and 401 Water Quality Certification permitting process. Off-site mitigation opportunities have been identified so that they can be implemented as quickly as possible in the event that an impact occurs. The off-site mitigation project for stormwater impacts, contingent upon a 10-year storm event resulting in the release of untreated water from runoff and dewatering activities, would be identified in coordination with the RWQCB. Examples of potential erosion and sediment management projects include funding identified Natural Resources Conservation Service proposed projects along Arroyo de la Laguna or implementing a mitigation site in the Sunol Valley, where several opportunities for erosion and sediment management have been identified. In the event that off-site stormwater control projects are implemented, impacts of off-site mitigation on water quality, sensitive wildlife, and archaeological resources will be minimized and avoided through implementation of Mitigation Measures 5.4.1, 5.4.2, 5.7.1, 5.10.2, and 5.10.5. Also, surveys for archaeological resources will be conducted prior to commencing work on the projects. **Hazardous Materials Handling Near Water (includes measures for barges, if selected)** • In the SWPPP, specify appropriate construction and material transportation and stockpiling practices to reduce the potential for discharging sediment and other construction materials into Calaveras Reservoir or for ~~in~~decreasing turbidity related to barging and the construction of temporary docking facilities (if used): – Establish and enforce barge and tugboat speeds and no-wake zones to decrease disturbance, erosional energy, and turbidity. – Perform loading and unloading of the barges within designated areas that are isolated from the rest of the reservoir by turbidity barriers. – Use barges / tug boats with dry exhaust systems and/or four-stroke engines to minimize combustion byproducts from entering the reservoir. **Sanitary and Greywater Waste Management** • Provide temporary sanitary facilities for construction workers that completely contain all sanitary and greywater waste produced at the construction site with the waste trucked to an appropriate disposal site. • Locate facilities in convenient locations. • Locate temporary sanitary facilities away from drainage facilities, watercourses, and traffic circulation.	

			• Secure temporary sanitary facilities to prevent overturning when subjected to high winds or risk of high winds. • Use only reputable, licensed sanitary waste haulers. • Maintain sanitary facilities in good working order and arrange regular collection to prevent overflows. • Require regular maintenance of facilities and inspect facilities weekly during the rainy season and at two-week intervals in the non-rainy season to verify proper maintenance. **Equipment Washing** • Do not discharge water from equipment washing into drainages, or allow it to percolate into the ground. • Wash equipment off site, except when on-site washing is required to reduce hazards associated with NOA. Prior to first use on the CDRP, equipment shall be washed to remove debris that could be a source of foreign contaminants such as non-native invasive plant seeds or propagules. If equipment must be washed on site, then only water may be used. Do not use soaps, solvents, degreasers, steam cleaning, or other similar products or methods unless all of the discharge is collected for appropriate off-site disposal. **Post-Construction Site Restoration and Stabilization** • Upon project completion, return the project site to its general condition before construction, including re-grading the site and re-vegetating disturbed areas. • Prepare and implement a detailed re-vegetation plan to ensure that appropriate plant cover (i.e., no invasive non-native plant species) becomes established in disturbed areas. This plan will identify measures to establish vegetation by planting, seeding, and irrigation, if necessary. The restoration plan will specify slope inclination and permanent drainage swales and berms to mitigate erosion of the disposal fills. **Monitoring and Reporting** • During construction, ~~N~~notify the RWQCB, Alameda County Water District, Alameda County Environmental Health Services Department, ~~and~~ East Bay Regional Park District, and the Alameda County Flood Control and Water Conservation District in the event of elevated turbidity or a spill or release of contaminants, NOA, or metals to any waterways in the Alameda Creek system. See also Air Quality Mitigation Measure 5.13.1a, below.	

Impact 4.7.2 in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-67 is revised as follows:

4.7.2	Impact on water bodies as a result of a hazardous waste release, NOA or metals release, or sanitary, greywater, or solid waste discharge during construction	**S**	**5.7.2 Drilling Fluids** If drilling muds/fluids are used for drilling operations, the SFPUC will ensure that drilling fluids contain only water and bentonite or similar inert substances (i.e., contain no environmental pollutants) and that any drilling fluids used are properly contained. If on-site containment and dewatering methods are used, the SFPUC and its contractors will ensure the contained materials are not susceptible to runoff during storms. Barriers (e.g., silt fence or berm) will be installed to prevent discharge of drilling fluids to receiving waters. Drilling fluids will be dewatered on site if approved by regulatory permitting agencies and/or properly disposed of off site. The SFPUC or its contractor will prepare and implement a Drilling Contingency Plan to manage the inadvertent release, or "frac-out," of drilling fluids. If the contactor prepares the plan, it will be subject to approval by the SFPUC before drilling work can begin. The Drilling Contingency Plan will include measures to minimize the potential for a frac-out (e.g., pre-planning of the drilling profile based on ground conditions so that the potential for a release of fluids is minimized); provide for the timely detection of frac-outs; and ensure an organized, timely, and "minimum-impact" response in the event of a frac-out and release of drilling fluid. Specifically, the Drilling Contingency Plan will require, at a minimum, the following measures and content:	**LSM**

Mitigation Measure 5.9.2a in Table S.2: Summary of Impacts and Mitigation Measures starting on EIR page 1-70 under Impact 4.9.5, is revised as follows:

4.9.2	Release of airborne NOA and naturally occurring metals from excavation, hauling, blasting, tunneling, placement, and on-site disposal of Franciscan Complex serpentinite or mélange.	**S**	**5.9.2a Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring ~~Plan~~ Program** The SFPUC shall prepare an ~~a~~Asbestos Dust Mitigation Plan for approval by the Bay Area Air Quality Management District (BAAQMD) as required in Section 93105 of Title 17 of the California Code of Regulations, "Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations." The SFPUC shall also prepare a Comprehensive Air Monitoring Program that shall be submitted for review by the BAAQMD. The Asbestos Dust Mitigation Plan shall specify site-specific measures that ~~would~~ will be ~~taken~~ implemented to minimize emissions of naturally occurring asbestos (NOA) and metals-containing dust. Risk-based trigger levels will be utilized	**LSM**

			during construction to evaluate whether additional dust control measures are required so that the project does not cause unacceptable off-site exposure ~~and to ensure that~~ to airborne asbestos and metals (including chromium, nickel, arsenic, copper, and cobalt).~~ concentrations do not exceed regulatory approved risk-based trigger levels at the air monitoring perimeter of work limits during construction.~~ Off-site exposure will be evaluated for receptors that are located beyond the control boundary, which in turn, entirely encompasses the work area boundary of the project.[4] The SFPUC shall include all applicable ~~dust mitigation~~ measures set forth in the Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program in the construction contract for the project. The SFPUC ~~would~~ shall also engage a third party consultant that would provide review and monitoring of the construction contractor's air monitoring activities, other ~~NOA-~~ related construction contractor worker protection measures, and the construction contractor's NOA soil and rock evaluations for compliance with contract requirements. The consultant ~~would~~shall also conduct the comprehensive air monitoring required by the Comprehensive Air Monitoring ~~Plan~~ Program (described below). The third party consultant ~~would~~shall be qualified in ambient air monitoring under the supervision of a Certified Industrial Hygienist who is also a California Certified Asbestos Consultant or who has current 40-hour AHERA training. Examples of dust control measures that may be implemented include the measures identified in the Asbestos Airborne Toxics Control Measure (ATCM) and the 2010 BAAQMD California Environmental Quality Act Air Quality Guidelines, as well as project-specific measures to be included in the Asbestos Dust Mitigation Plan. As provided for in the Asbestos ATCM, alternative measures that provide an equivalent level of dust control may be included in the Asbestos Dust Mitigation Plan subject to BAAQMD authorization. The Asbestos ATCM and the BAAQMD Air Quality Guidelines include~~s~~ the following dust control measures ~~for~~ applicable to construction activities in NOA containing areas: • Restriction of vehicle speeds on on-site unpaved roads, staging areas, and parking lots to 15 miles per hour; as well as wetting, use of a chemical dust suppressant, or use of a gravel cover containing less than 0.25 percent asbestos or other effective measures in these areas to control dust generation; • Wetting all exposed surfaces at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe;	

			• Wetting of work surfaces prior to and during construction activities and suspension of grading operations when wind speeds are high enough to result in visible dust emissions crossing the ~~air monitoring perimeter of work limits~~ work area boundary that would incorporate all active work areas; • Suspension of all excavation, grading, and/or demolition activities when average wind speeds exceed 20 mph; • Wetting or use of a cover to control dust from active storage piles; • Wetting, use of a chemical dust suppressant, use of a cover (such as a tarp or vegetative cover), establishment of a surface crusting, use of wind barriers or other effective measures to control dust from inactive storage piles and inactive work areas; ~~• Cleaning of all visible track-out on paved public roads at the end of the work day or at least once per work day;~~ • Removal of all visible mud or dirt track-out onto adjacent public roads using wet power vacuum street sweepers at least once per work day. The use of dry power sweeping is prohibited; • Implementation of track-out prevention measures such as a gravel pad, wheel wash system, use of a paved approach, or other equally effective measures to prevent and control track-out to a public road; • Loading of trucks for ~~off-site~~ transport of NOA-containing materials outside the work area boundary such that no spillage could occur, as well as wetting the load, covering it with a tarp and loading the truck such that material does not touch the front, back, or sides of the cargo compartment at any point less than 6 inches from the top and that no point in the load extends above the top of the cargo compartment (note that this measure is included for completeness to be consistent with the Asbestos ATCM, but would not be required for the proposed project because no NOA-containing materials would be transported outside the work area boundary as part of the project); ~~and~~ • Limiting the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time. Activities shall be phased to reduce the amount of disturbed surfaces at any one time; • Paving all roadways, driveways, and sidewalks planned for paving as soon as possible after the start of construction;	

			• Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used; • Washing all trucks and equipment, including tires, such that they shall be free of NOA, prior to leaving the site; • Post-construction stabilization of disturbed areas with vegetative ground cover (fast-germinating native grass seed), placement of at least 3 inches of non-asbestos containing material, paving, or any other measure deemed sufficient as soon as possible and water appropriately until vegetation is established;~~ to prevent wind speeds of 10 miles per hour or greater from causing visible dust emissions.~~ • Treating site accesses to a distance of 100 feet from the paved road with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel; • Posting a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations; and • Restricting blasting activities in areas of NOA and metals to daylight hours Monday through Friday and when average wind speeds are ~~less than~~ 20 miles per hour or less. If needed for adequate dust control, t~~T~~he Asbestos Dust Mitigation Plan ~~may~~shall also include additional project-specific dust control actions (enhanced measures) for general construction activities, drilling, blasting, rock processing, tunneling, and dam foundation cleaning activities to prevent ~~NOA and metals~~ visible dust from migrating beyond the ~~project site~~ work area boundaries. Enhanced measures would also be implemented if daily air monitoring detects an exceedance of the established trigger levels at a perimeter monitoring location. Examples of possible ~~These~~ actions include: • ~~Washing of equipment used in NOA-disturbing activities after use and prior to removing it from the site;~~ • Increased frequency of ~~S~~sweeping all paved access roads, parking areas, and staging areas daily; • Reducing wind speeds to soil surfaces (by using a wind screen or changing the shape or orientation of the stockpile) to control dust from active storage piles; • Drilling with water in NOA-containing areas;	

			~~• Restricting blasting activities in areas of NOA and metals to Monday through Friday;~~ • Wetting blast areas as feasible, before, during, and after the blast; • Using blasting blankets as feasible; • Continuous misting or using an equivalent water application technique during the cleaning of the dam foundation and processing of earth and rockfill materials for the new embankment where NOA- and metals-containing rock is present; • Wetting the adit and shaft work surfaces and materials when tunneling in NOA and metals-containing rock, as well as materials derived from these activities; • Prohibiting the use of compressed air for drilling and foundation cleaning and the use of air-driven jack hammers for any activities disturbing NOA-containing rocks unless measures are implemented to capture or control airborne dust generated by the process; • Applying water whenever NOA-containing materials are being removed from the tunnel or adits by mechanical processes such as shovels, excavator buckets, and hydraulic breakers; and/or • Using a treatment system such as a baghouse or HEPA-type filtering device to remove NOA-containing dust from the tunnel exhaust air. The measures in the Asbestos Dust Mitigation Plan may be altered, supplemented, or replaced during the BAAQMD's review process, since the BAAQMD has final authority over the terms of the Asbestos Dust Mitigation Plan. The SFPUC shall prepare and implement a Comprehensive Air Monitoring ~~Plan~~ Program that ~~would~~ will describe monitoring that ~~would~~will be conducted to demonstrate compliance with the Asbestos ATCM. The plan ~~would~~will specify ~~two~~ three types of daily monitoring: 1) air monitoring to be conducted at the perimeter monitoring locations (locations along or within the control boundary) ~~air monitoing perimeter~~; ~~and~~ 2) construction activity area monitoring of specific ~~cells of~~ construction ~~activity~~ activities within the work area boundary to provide an added level of analysis ~~and control of dust generation~~ during construction; and 3) ambient air monitoring at locations in the vicinity of the project and Sunol Regional Wilderness Area that are outside the control boundary. ~~Close m~~Monitoring of construction ~~activity cells~~ activities will provide information to demonstrate whether the generation of dust, asbestos and metals is being effectively controlled at the source, before it reaches the work area boundary~~limits, providing valuable~~	

			~~information regarding the contractor's dust control measures in each cell while monitoring at the perimeter of the work limits would be used to demonstrate compliance with the Asbestos ATCM~~. Perimeter monitoring locations will be selected within or at the control boundary to detect dust, asbestos, and metals for comparison with the trigger levels identified in the Comprehensive Air Monitoring Program. In addition, monitoring will include continuous collection of meteorological data on wind speed and direction in the project area. The Comprehensive Air Monitoring ~~Plan~~ Program ~~would~~shall specify the location(s) and frequency of perimeter monitoring, and risk-based trigger levels of asbestos and metals (including chromium, nickel, arsenic, copper, and cobalt) that would be protective of off-site receptors (e.g., recreational users of Calaveras Road and/or nearby trails in the Sunol Regional Wilderness area, as well as visitors, residents, and park employees~~workers stationed in the Sunol Wilderness~~)~~,~~. The Comprehensive Air Monitoring Program shall also specify ~~and~~ corrective actions to be taken should the ~~acceptable~~ trigger level of asbestos or metals be exceeded at perimeter monitoring locations. ~~Should~~If trigger levels ~~be~~are exceeded at a perimeter monitoring location, the SFPUC ~~would~~shall notify Alameda County, East Bay Regional Park District, and other applicable entities~~,~~; ~~to coordinate activities that may include closure of the affected road or trail,~~ investigate the cause of the exceedance~~,~~; and implement corrective actions such as implementation of enhanced dust suppression techniques. Should corrective action fail to bring asbestos or metals concentrations to within ~~acceptable~~ risk-based trigger limits, the Comprehensive Air Monitoring ~~Plan~~ Program ~~would~~ will require the contractor to modify or temporarily halt construction activities in areas generating excessive dust until dust generation could be maintained within ~~acceptable~~ trigger levels. ~~Affected roads and trails would not be reopened until monitoring indicated that asbestos and metals concentrations are within acceptable limits.~~ Should trigger levels be exceeded in the tunnel emissions, the SFPUC ~~would~~ shall investigate the cause of the exceedance, and implement corrective actions such as implementation of enhanced dust suppression techniques or additional emission controls. Should corrective action fail to bring asbestos concentrations to within ~~acceptable~~ risk-based trigger limits, the Comprehensive Air Monitoring ~~Plan~~ Program ~~would~~ shall require the contractor to reduce or stop tunneling in areas generating excessive dust until dust generation could be maintained within ~~acceptable levels~~ trigger limits.	

			~~Both t~~The Asbestos Dust Mitigation Plan ~~and Comprehesive Air Monitoring Plan would~~ shall be subject to review and approval by the BAAQMD prior to the start of construction. The Comprehensive Air Monitoring Program shall be reviewed by the BAAQMD prior to the start of construction. [4] The "work area boundary" is defined as the limits of the active work areas of the project, within which soil and rock will be disturbed during construction; construction activity area monitoring locations will be within the work area boundary. The "control boundary" will be identified under the Comprehensive Air Monitoring Program and will encompass the work area boundaries and lie entirely within the CCSF-owned property boundary; perimeter monitoring locations will be located along or within the control boundary.	

Mitigation Measure 5.9.5, Hazardous Materials in Structures to be Demolished, in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-76 under Impact 4.9.5, is revised as follows:

4.9.5	Release of hazardous building materials from demolition of existing structures.	S	**5.9.5 Hazardous Materials in Structures to Be Demolished** Any electrical equipment containing polychlorinated biphenyls (PCBs), fluorescent lights containing mercury vapors or fluorescent light ballasts containing PCBs or Bis (2-ethylhexyl) phthalate (DEHP) in any of the structures to be demolished shall be removed and legally disposed of ~~properly~~ at a permitted off-site facility.	**LSM**

Mitigation Measure 5.12.4a, Traffic Control Plan, in Table S.2: Summary of Impacts and Mitigation Measures starting on EIR page 1-84 under Impact 4.12.4, is revised as follows:

4.12.4	Increased potential for traffic safety hazards for vehicles and bicyclists on public roadways during construction.	S	**5.12.4a Traffic Control Plan** The SFPUC or its contractor(s) shall prepare and implement a Traffic Control Plan. To the extent applicable, the Traffic Control Plan should conform to the state's Manual of Traffic Controls for Construction and Maintenance Work Areas. As applicable, elements of the Traffic Control Plan should be coordinated with applicable agencies and include, but are not necessarily limited to, the following: • SFPUC and its contactors shall coordinate individual traffic control plans for SFPUC projects in the Sunol Valley. • Advance warning signs shall be installed on Calaveras Road north of Geary Road and on Felter Road and East Calaveras Road south of the dam advising motorists of the construction zone ahead to minimize hazards associated with potential conflict with construction vehicles and to notify motorists of weekday closure of Calaveras Road between Geary Road and Felter Road.	**LSM**

			• The SFPUC shall develop a program to notify the potential users (including drivers, bicyclists, and pedestrians) of Calaveras Road between Geary Road and Felter Road of the schedule of roadway closures, detour route for vehicles, and alternate recreational bicycle routes. The SFPUC shall disseminate this information by posting signs along Calaveras Road north and south of the dam, providing up to date details to the East Bay Regional Park District, Alameda County and Santa Clara County, and posting this information on a project website or other easily-accessible media. • Either flaggers, illuminated signs, a temporary stoplight, a flashing yellow light, or a combination of these methods shall be utilized to slow approaching traffic at project access points on Calaveras Road at Geary Road and at Felter Road. • Locations shall be identified for parking by construction workers within the established work area. • Construction shall be coordinated with police and fire, local hospitals, and schools. Operators shall be notified in advance of the timing, location, and duration of construction activities and the location of detours and roadway closures. • Public roadway rights-of-way shall be repaired or restored to their pre-construction conditions upon completion of construction. The SFPUC shall inspect and document the condition of Calaveras Road prior to and after completion of the project and, if roadway damage is detected, enter into an agreement with Alameda and Santa Clara Counties or the City of Milpitas, if applicable, for implementing a post-construction roadway repair/rehabilitation program. At a minimum, roads damaged by the project shall be repaired to a structural condition equal to that which existed prior to the project construction activities at no expense to Alameda or Santa Clara Counties, or the City of Milpitas. Maintenance of adequate driving and bicycling conditions of Calaveras Road during the construction period shall also be addressed. • To the extent applicable, the traffic control plan shall conform to the *California Manual on Uniform Traffic Control Devices for Streets and Highway: Part 6 Temporary Traffic Control* (Caltrans 2006). • If applicable, the construction contractor shall obtain a truck haul permit related to construction vehicle travel through the City of Milpitas. • The closed portion of Calaveras Road between Geary Road and Felter Road shall be swept clean before 6:00 am Saturday morning, and re-opened to traffic on Saturday and Sunday.	

Chapter 3, Project Description

The first sentence in the second paragraph under Section 3.3.1.1 on EIR page 3-11 is revised and a new paragraph is added as follows:

> The spillway is capable of passing the flows of the Probable Maximum Flood* (PMF) (estimated at 39,700 cfs) although such an event has not yet occurred in the life of the dam (URS 2007a)….
>
> Calaveras Dam has spilled infrequently prior to the DSOD restrictions. Based on reservoir elevation records, the reservoir was allowed to fill and spill for prolonged periods of time, an average of about 67 days in years when spill occurred. The maximum rate of spill was approximately 5,813 cubic feet per second (cfs) on April 3, 1958. That flow over the spillway was about~~12~~ 15 percent of the projected flow under the PMF event.

The fourth paragraph on EIR page 3-11 is revised as follows:

> Calaveras Dam has spilled infrequently prior to the DSOD restrictions. Based on reservoir elevation records, the reservoir was allowed to fill and spill for prolonged periods of time, an average of about 67 days in years when spill occurred. The maximum rate of spill was approximately 5,813 cubic feet per second (cfs) on April 3, 1958. That flow over the spillway was about ~~12~~ 15 percent of the projected flow under the PMF event.

The fourth paragraph beginning on EIR page 3-64 is deleted and replaced with the following paragraph:

> ~~The ACDD would be operated similar to pre-DSOD restriction conditions, namely, the diversion gates would be opened at the beginning of the wet season and closed at the beginning of the dry season. However, the SFPUC will prepare an ACDD Operations Plan, as part of the CDRP, which directs that the diversion dam and tunnel be operated to pass flows down Alameda Creek when diversion of those flows is not required to maintain desired levels in Calaveras Reservoir. There would be a decrease in average annual diversions from Alameda Creek compared to diversions under current DSOD-restricted conditions; as further discussed under Sections 3.6.5, Resident Rainbow Trout Releases, and Section 3.6.6, Steelhead Flow Releases, below, flows to support native fishes would be provided through the proposed ACDD bypass tunnel whenever flow is available in upper Alameda Creek. Additional releases from Calaveras Reservoir to support native fishes would also occur pursuant to the 1997 Memorandum of Understanding (MOU) during periods when colder water is needed in Alameda Creek and when flows are not available at the ACDD. (See further discussion in Section 4.6, Hydrology.)~~
>
> Currently, with DSOD restrictions in place, the gates on the diversion tunnel at the ACDD are not opened on a set schedule. Depending on hydrological/meteorological conditions, the gates could be opened in the fall or winter, then closed again in the winter or spring. In 2005 and 2006 there were no diversions at the ACDD. With the proposed project in place, operation of the gates would change. As part of the CDRP, the SFPUC will prepare an ACDD Operations Plan, which will direct that the diversion dam and

> tunnel be operated to pass flows down Alameda Creek whenever diversion of those flows is not required to achieve the target storage in Calaveras Reservoir. Also, as part of the CDRP, the SFPUC would make releases from the ACDD and Calaveras Reservoir to support native fishes and other aquatic resources. Releases to support resident trout consistent with the 1997 MOU, and as described in Section 3.6.5, Resident Rainbow Trout Releases, would commence once the CDRP is completed. Releases to support steelhead, as described in Section 3.6.6, Steelhead Flow Releases, would commence once downstream barriers to steelhead migration are removed and steelhead have regained access to the upper Alameda Creek watershed. The releases to support native fishes would be made from the ACDD whenever there is sufficient flow present in upper Alameda Creek, and otherwise would be made from Calaveras Reservoir. Consistent with the 1997 MOU, releases may also be made from Calaveras Reservoir when cold water from the reservoir pool is needed in Alameda Creek to support aquatic resources, such as during the summer when creek water temperatures would be elevated.

The last paragraph on EIR page 3-66 is modified to read as follows:

> "…however, releases from Calaveras Dam still would be required to meet flow and temperature requirements, particularly in summer. The flow schedule for resident fish and aquatic resources described in Section 3.6.5 of the EIR would be implemented immediately after project construction is complete. To meet the MOU total flow of 6,300 AFY,…"

The following text is added to Section 3.7.3 on EIR page 3-74 before the bullet "Bay Area Air Quality Management District":

- California Emergency Management Agency (Cal EMA)
  - Approval of Dam Inundation Map and Technical Study – A dam failure inundation map must be provided to Cal EMA at least 60 days prior to filling Calaveras Reservoir after the new dam is completed. Cal EMA reviews dam inundation maps to identify areas where death or injury would result from the partial or total failure of a dam and then determines whether adequate public safety measures exist for the evacuation and control of populated areas below the dam.

Chapter 4, Environmental Setting and Impacts

Section 4.2, Plans and Policies

The following statement is added as the last sentence in the second full paragraph on EIR page 4.2-12:

> The Parks and Recreation Element encourages implementation of a countywide system of trails, including trails within and between parks and other publicly owned open space lands, and trails linked to regional facilities including the Bay Area Ridge Trail.

The following sentence is added to the end of the last paragraph on EIR page 4.2-17:

> The project also would not conflict with goals to implement and preserve a system of countywide trails and trails linked to the Bay Area Ridge Trail, as project construction

> would not permanently alter existing or proposed trails in the vicinity of Ed R. Levin County Park.

Section 4.3, Land Use

The next-to-last sentence in the paragraph ending on the top of EIR page 4.3-4 is revised as follows:

> South of Geary Road near the visitor center for the Sunol Wilderness, there is a year-round EBRPD residence, located about 1.2 miles from ~~Borrow Area D/Dam Vicinity~~ Borrow Area B/Dam Vicinity.

The first sentence in the first full paragraph on EIR page 4.3-9 is revised as follows:

> The SFPUC currently leases ~~3,800~~ 3,812 acres to the EBRPD as part of the 6,858-acre Sunol Regional Wilderness. The Sunol Regional Wilderness is located between San Antonio Reservoir and Calaveras Reservoir.

The fifth sentence in the second full paragraph on EIR page 4.3-9 is revised as follows:

> The Sunol Wilderness has over 26 miles of trails for hikers and equestrians and several multi-use trails for hikers, equestrians, and mountain bikers. Recreational facilities and programs include picnic areas, barbecue pits, group and backpack campsites, a visitor's center, naturalist-led activities, and equestrian facilities. At least one camping area is located adjacent to Alameda Creek. Little Yosemite, a scenic gorge on Alameda Creek, is located within the Sunol Wilderness. Swimming is ~~not~~ prohibited within the Sunol Wilderness~~, except in Little Yosemite~~. Other water sports, including boating, rafting, and canoeing, generally are not feasible in this portion of Alameda Creek due to the creek's water level, and fishing is not allowed in Alameda Creek. There is an EBRPD residence occupied year round south of Geary Road near the visitor center.

The first sentence in the first paragraph on EIR page 4.3-10 is revised as follows:

> The EBRPD's Del Valle Regional Park is located north and east of the project site. The park encompasses approximately ~~4,000~~ 4,395 acres in central Alameda County, about 10 miles south of the City of Livermore off Interstate 580.

The third paragraph on EIR page 4.3-10 is revised as follows to provide additional information:

> **Ed R. Levin County Park**
>
> The 1,539-acre Ed R. Levin County Park lies on the border of Alameda County and Santa Clara County, approximately 2 miles west of the Calaveras Reservoir. ~~The county park surrounds the Spring Valley Golf Course.~~ Portions of its western half are within the City of Milpitas and its ~~the~~ eastern edge ~~of the county park~~ borders ~~on the~~ SFPUC-owned watershed lands. Calaveras Road, west of Felter Road, bisects the southern portion of the park. ~~This park~~ Ed R. Levin County Park offers many recreational facilities and activities, including over ~~picnic and play areas, and~~ 19 miles of regional and internal park trails (including a stretch of the Bay Area Ridge Trail), a group camping area, an off-leash dog park, an equestrian staging area, and picnicking, fishing, hang gliding, and golfing facilities. Spring Valley Golf Course, a leased facility, and Airpoint School, a private in-holding property, are located within the park. ~~for hiking, cycling, and~~

> ~~horseback riding, including a stretch of the Bay Area Ridge Trail. It also includes areas for fishing and hang gliding.~~ The southern portion of the park contains numerous trails designated for hiking and equestrian use, four of which parallel Calaveras Road. In addition, there are approximately six trail access/crossing points within the park, including a segment of the Bay Area Ridge Trail, which cross Calaveras Road (SCCPRD 2009).

The third complete sentence in the first full paragraph on EIR page 4.3-16 is revised as follows:

> Further, ~~any indirect project effects, such as those resulting from increased construction traffic, would be similar to ongoing activities that occur in the vicinity;~~ all existing land uses would continue to operate uninterrupted throughout the construction period, including the existing dam, which would continue to operate under restricted conditions.

The last paragraph on EIR page 4.3-22 (and continuing on EIR page 4.3-23) is revised as follows:

> Construction-related traffic effects, including ~~T~~the closure of Calaveras Road, ~~is~~ are not expected to limit recreational use of the Ed R. Levin County Park. Several public roads and one private road within the park boundary originate or have access from Calaveras Road west of the location of the road closure at Felter Road; these include Downing Road, the park entry on Old Calaveras Road, the park's maintenance facility road, Spring Valley Road, park access to equestrian facilities and trails, and Vista Ridge Drive, a private residential road. As described in the discussion of Impact 4.12.2 in Subsection 4.12.2.3, the majority of construction worker trips and construction vehicle trips would occur on Calaveras Road north of the dam, between I-680 and Geary Road. No construction trucks are expected to reach the project work area via Calaveras Road south of the reservoir, with the exception of equipment to be used at Staging Area 11 and Borrow Area E. Therefore, potential construction-related traffic would not be expected to result in substantial adverse impacts on park access roads, recreational facilities, or trails along Calaveras Road between Felter Road and I-680. Implementation of Mitigation Measure 5.12.4a would avoid or reduce any potential impacts to less-than-significant levels.
>
> Closure of Calaveras Road would also not be expected to limit recreational use of ~~and~~ the EBRPD's Mission Peak Regional Preserve and Del Valle Regional Park facilities. These recreational facilities would not be affected by the proposed project because of their distance from the proposed construction activities. Roads that lead to these park entrances are not part of the network of roads that would accommodate the project-related increase in traffic or would be closed during any portion of the construction period of approximately 4 years.

The following new reference is added to EIR page 4.3-24, after the reference to San Francisco Planning Department 2001:

> Santa Clara County Parks and Recreation Department (SCCPRD). 2009. Letter communication, Antoinette Romeo, Park Planner. December 19, 2009.

Section 4.4, Vegetation and Wildlife

The following sentence in the third full paragraph on EIR page 4.4-65 is revised as follows:

> Under the Porter-Cologne Water Quality Control Act, wetlands and drainages that are considered waters of the United States by the USACE are ~~often~~ classified as waters of the state as well. ~~However, w~~Waters of the state ~~can~~ also include waters USACE deems to be isolated or non-jurisdictional under Section 404 of the CWA.

The last sentence of the second paragraph under "Porter-Cologne Water Quality Control Act" on EIR page 4.4-65 is revised as follows:

> Impacts on waters of the state ~~typically~~ require mitigation requiring no net loss of wetlands functions, acreage, and values of waters of the state.

The sixth sentence of the second paragraph on EIR page 4.4-82 is revised as follows:

> The change in flows ~~would have no~~ is expected ~~net~~ to have no substantial effects on the riparian woodland communities…

The last sentence of the second paragraph on EIR page 4.4-82 is revised as follows:

> As described in Impacts 4.6.10 and 4.6.11, c~~C~~hannel incision is not expected to result from operation of the proposed project ~~be an important factor because of the large cobble content of the substrate~~.

The first sentence of the first full paragraph on EIR page 4.4-87 is revised as follows:

> Because Calaveras Creek below Calaveras Dam is relatively short and impaired, ~~F~~flows released at the dam would likely have less benefit for the California red-legged frog than flows bypassed from the ACDD.

The heading on EIR page 4.4-88 is revised as follows:

> Alameda Creek ~~Downstream of~~ from ACDD to the Calaveras Creek Confluence

The fourth complete sentence in the partial paragraph at the top of EIR page 4.4-89 is revised as follows:

> Compared to the baseline, minimum flows would provide more water during the California red-legged frog breeding and rearing season. Minimum flows would provide less water than under baseline years without diversion; however, they ~~would~~ are expected to maintain habitat availability for California red-legged frog in Alameda Creek downstream of the ACDD by providing sufficient flow to sustain breeding habitat.

The following new paragraph is inserted after the first paragraph on EIR page 4.4-89:

> Increased operation of the ACDD could cause a minor increase in exposure to existing sources of injury or mortality of California red-legged frog through entrainment at the diversion tunnel. In order to enter the diversion, eggs, larvae, juvenile or adults would have to already have been caught in high flows. Once entrained by high flows (meaning they cannot swim well enough to escape to sheltered water or land), they are already

> subjected to several sources of injury and mortality, including collisions with rocks and other hard objects, increased exposure to predation, stranding, and desiccation. This is a natural condition for creek-breeding amphibians. As an example, EBRPD found 14 dead metamorphs at the bottom of Little Yosemite following a high flow event ; it is presumed they died as a result of being battered on rocks after they were swept into the gorge (Bobzien, personal communication on 9/27/06). Entrainment into the diversion tunnel would incrementally increase exposure to these existing causes of damage or mortality. It is not known how many frogs could be entrained into the diversion tunnel, however this impact would mostly affect tadpoles and metamorphs, which are usually present in Alameda creek by about late March. Eggs dislodged from their oviposition sites are unlikely to survive, and juveniles and adults are not restricted to aquatic habitat; they can avoid high flows by moving to land. Therefore, the potential increase in mortality resulting from operation of the ACDD diversion cannot readily be quantified but is expected to be minor.

The first full paragraph on EIR page 4.4-92 is revised as follows:

> Under future operation of the Calaveras Dam and ACDD, establishing bypass flows at the ACDD could improve conditions for California red-legged frogs in Alameda Creek; implementing them from Calaveras Dam in summer and fall would improve habitat conditions especially during critical dry season flows. Increased diversions to the Calaveras Reservoir through the diversion tunnel could result in a minor increase in the existing potential for injury or death of California red-legged frogs that are entrained by high flows above the diversion.

The first full paragraph on EIR page 4.4-104 is revised as follows:

> Impacts of operation would occur by the same mechanisms as described for creeks under the California red-legged frog (Impact 4.4.2). Operation of Calaveras Dam would affect the foothill yellow-legged frog habitat in the same four reaches: (1) Calaveras Creek below Calaveras Dam, (2) Alameda Creek ~~between~~ from the ACDD and to the confluence with Calaveras Creek, (3) Alameda Creek from Calaveras Creek to Arroyo de La Laguna, and (4) Alameda Creek in the extended study area.

The fourth full paragraph on EIR page 4.4-104 is revised as follows:

> In Alameda Creek from the ACDD to the confluence with Calaveras Creek (Reaches A-3 and A- 4), operation of the CDRP would decrease total wet season flows but the bypassing of water at the ACDD would ensure that there would be some flow in the creek during most winter months ~~increase dry season flows but reduce wet season flows~~. Bypasses would typically continue into the spring so the duration of the period when the creek is almost completely dry would be reduced. Pools created by the bypasses could persist into the summer. ~~Dry season flows would be increased by providing minimum flows established in the MOU (CDFG 1997).~~ This would improve habitat in Alameda Creek by making aquatic habitat more reliably available, annually, during the breeding season. In this reach, Alameda Creek is not impaired by bullfrogs upstream of Little Yosemite. Increased diversions, relative to baseline, would cause a small increase in potential impacts from entrainment in the diversion tunnel by the same mechanism described for California red-legged frog in Impact 4.4.2.

The first full paragraph on EIR page 4.4-106 is revised as follows:

> Operation of the replacement dam, reservoir, and ACDD would maintain foothill yellow-legged frog habitat in Alameda Creek between the ACDD and Calaveras Creek, but could cause a minor increase in potential impacts from entrainment in the diversion tunnel.

Impact 4.4.9b (EIR pages 4.4-108 – 4.4-109) discusses impacts on raptors, and is expanded to explicitly cover peregrine and prairie falcons, as shown below:

> **Impact 4.4.9b: Effect of CDRP on nesting raptors.**
>
> Impacts of Construction
>
> The study area contains suitable nesting habitat for ~~both~~ tree-, cliff-, and ground-nesting raptors. Tree nesting raptors, such as golden eagle, white-tailed kite, and Cooper's hawk (*Accipiter cooperii*), may use upland and riparian forest for nesting. American peregrine falcon and prairie falcon could nest on cliffs in the vicinity of the dam. Northern harrier and burrowing owl may use grasslands in the study area for nesting although they have not been observed during breeding raptor surveys. Additionally, burrowing owls are uncommon breeders in the region, and there is a low likelihood that they nest in the project area (Center for Biological Diversity 2003).
>
> Construction of the proposed project, including construction of haul routes and blasting, could result in direct mortality of eggs or young raptors, including golden eagle, white tailed kite, American peregrine falcon, prairie falcon, northern harrier, and burrowing owl, if active nests are destroyed or abandoned as a result of disturbance by noise, vehicles, foot traffic, or other mechanisms during construction. This impact is similar in kind to that discussed under Impact 4.4.6 for the bald eagle. This impact would be a significant environmental effect.

Section 4.5, Fisheries

The reference to the "ACFCWCD channelization project" under the first bullet on EIR page 4.5-13 is revised as follows:

> ACFCWCD ~~channelization project~~ flood control channel

The second full paragraph on EIR page 4.5-25 is revised as follows:

> Beginning downstream of the Arroyo de la Laguna confluence, Alameda Creek flows approximately 6.5 miles through Niles Canyon to Niles Junction (near the crossing of Highway 238). The stream channel is relatively confined within the steep walled canyon and, with the exception of Highway 84 and a rail line, there is little development on the narrow flood plain and surrounding hills. There is a relatively well-developed riparian zone throughout Niles Canyon. There ~~are two~~ is one major tributary~~ies~~ in this reach, ~~Sinbad Creek and~~ Stonybrook Creek. The reach is a relatively low-gradient (approximately 1-2 percent) perennial stream characterized by large, moderately deep pools, and runs separated by short, shallow riffles. The substrate is highly variable, ranging from sand, gravel, and cobble-dominated riffles and glides to cobble-boulder and silt, mud, and sand pools.

The second full paragraph on EIR page 4.5-43 is revised as follows:

> Populations of resident rainbow trout occupy habitats in upper Alameda Creek, Calaveras Reservoir, and Arroyo Hondo in the primary study area (Leidy 1984, ETJV 2008). Young-of-year *O. mykiss* have been observed in Stonybrook Creek, a ~~and Sinbad Creek,~~ tributary~~ies~~ to the Niles Canyon reach of Alameda Creek (extended study area) (Gunther et al. 2000). ~~However,~~ ~~e~~Electrofishing in Sinbad Creek in 1997 and 1998 failed to capture any *O. mykiss*. Stonybrook Creek is regarded as potential *O. mykiss* habitat based on the presence of several age classes of resident individuals, including young-of-year (Gunther et al. 2000). Rainbow trout are also present in Indian Joe Creek, a tributary to upper Alameda Creek (EBRPD 2009, p. 7).

A description of the Porter-Cologne Water Quality Control Act and Basin Plan for the Bay Area Bay Basin is added to EIR page 4.5-49:

> Porter-Cologne Water Quality Control Act
>
> Under the Porter-Cologne Water Quality Control Act, "waters of the state" fall under the jurisdiction of the appropriate RWQCB. The RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Each basin plan protects water quality requirements for the following fisheries and aquatic habitat beneficial uses:
>
> - Cold Freshwater Habitat: Uses of water that support cold water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
> - Fish Migration: Uses of water that support habitats necessary for migration, acclimatization between fresh water and salt water, and protection of aquatic organisms that are temporary inhabitants of waters within the region.
> - Preservation of Rare and Endangered Species: Uses of waters that support habitats necessary for the survival and successful maintenance of plant or animal species established under state and/or federal law as rare, threatened, or endangered.
> - Fish Spawning: Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.
> - Warm Freshwater Habitat: Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
> - Wildlife Habitat: Uses of waters that support wildlife habitats, including, but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl.
>
> The Porter-Cologne Water Quality Act as it relates to wetland habitat is discussed in Section 4.4.1.3, Vegetation and Wildlife Regulatory Framework. The Porter-Cologne Water Quality Act as it relates to water quality, is also discussed in Section 4.7.1.2, Water Quality Regulatory Framework.

A third paragraph is added to Impact 4.5.1 on EIR page 4.5-55 as follows:

> During the two summer construction periods, no releases would be made from Calaveras Reservoir outlet structures between mid-April and mid-November as described under Impact 4.6.1. If the two construction periods occur in wet or above normal years and if late season storms occur in those years, some releases of water that would occur in April under existing conditions would not occur during construction of the proposed project. If such a reduction in releases occurred, there could be a corresponding increase in releases in the rainy seasons following the two summertime construction periods. The changes in flow would be small and would have a less-than-significant impact on fisheries in Calaveras Creek and in Alameda Creek downstream of its confluence with Calaveras Creek.

The second paragraph on EIR page 4.5-71 is revised as follows:

> Based on the results of recent surveys conducted by the SFPUC in Calaveras and Alameda Creeks (see Table 4.5.3), an assessment of the existing fish community was conducted (ETJV 2008, pages 33-35) with reference to criteria developed by Moyle et al. (1998) (see Subsection 4.5.1, Setting). The assessment indicated that the existing hydrologic conditions in the reach of Alameda Creek downstream of the Calaveras Creek confluence appear to sustain aquatic habitat in a manner that supports a native warm water fish community~~, which includes resident rainbow trout,~~ in good condition.

The last paragraph on EIR page 4.5-76 is modified to read:

> Construction of the replacement dam would take approximately 4 years to complete. During ~~this period~~ project construction, no change from the existing condition would occur other than the known reservoir drawdown to the 690-foot elevation prior to the planned outlet works shutdowns. However, drawdown to this level is common under existing conditions with DSOD restrictions in place, and the planned drawdown would not differ significantly from existing operations (i.e., project related reservoir surface elevations would not change the extent to which the drawdown condition creates fish passage limitations), and thus construction of the proposed project would have little to no impact on hydrologic connectivity and fish passage between the reservoir and Arroyo Hondo. ~~Calaveras Reservoir level would be managed similar to existing conditions as required by the 1991 CDFG MOU (690 feet minimum elevation) (SFPUC 1991) and DSOD restrictions (705 feet maximum elevation).~~ The water quality conditions in the reservoir created by the low water levels are not ideal for some fish species, and it is necessary to operate a hypolimnetic oxygenation system (HOS) to improve them. Once construction of the dam is complete, the reservoir would be filled and operated in a manner that is similar to pre-DSOD restrictions, with a maximum water elevation of approximately 756 feet elevation (i.e., spillway elevation). The HOS system would continue to be operated during the construction period, during filling of the reservoir, and after the reservoir has been filled to maintain DO concentrations similar to those under existing conditions. Once the reservoir is filled, the increased volume of water would result in a greater cold-water pool volume than under current DSOD-restricted conditions.

In response to comments regarding the hydrologic connectivity condition, the first paragraph of EIR page 4.5-77 is revised as follows:

> During construction, hydrologic connectivity and fish passage between the reservoir and Arroyo Hondo would still be limited due to low water elevation, sediment wedge, and lack of a defined channel in the drawdown zone. ~~While the adverse impacts on the fish passage created by this disconnection of Arroyo Hondo and the reservoir can be inferred, there are no data that confirm that the lack of hydraulic connectivity has affected or would significantly adversely affect trout or other fish populations in either the reservoir or Arroyo Hondo.~~

The last sentence of the fourth paragraph on EIR page 4.5-79, shown below, is inaccurate and is thus deleted:

> ~~However, diversions by ACWD (specifics regarding the frequency, magnitude, and duration of future diversions are unknown) would further affect flows in the portion of Alameda Creek within the extended study area (i.e. at the mouth of Niles Canyon and lower Alameda Creek).~~

The following reference is added to EIR page 4.5-83 to after the reference to California Storm Water Quality Association 2003:

> East Bay Regional Park District (EBRPD). 2009. Comments on the DEIR for the Calaveras Dam Replacement Project. December 11, 2009.

Section 4.6, Hydrology

The last sentence of the second full paragraph on EIR page 4.6-11 is modified as follows:

> The northern Alameda Creek watershed drained by the Arroyo de la Laguna and Arroyo Mocho is not discussed further here because the proposed project would have no impact in that area, except in the event of catastrophic failure of Calaveras Dam.

The following text supplements the information provided in the EIR. For Impact 4.6.7: Operational effects on flow in Alameda Creek downstream of the Arroyo de la Laguna confluence (under the subheading "Project Watershed Contribution"), the following paragraph is added on EIR page 4.6-97 after the first full paragraph:

> The effects of the proposed project on flow in Alameda Creek at the Niles gage would persist as the creek emerges from the canyon and flows over the San Francisco Bay plain to its terminus at San Francisco Bay. Near its exit from Niles Canyon, the creek flows over alluvial material and loses flow naturally to the groundwater. Percolation of water into the ground is enhanced artificially as a result of ACWD operations. USGS gage data indicate that, during drier periods, little flow continues down Alameda Creek towards San Francisco Bay. USGS stream gage data show that 10 cfs or more of flow occurs in Alameda Creek at the Niles gage 60 percent of the time, but 10 cfs of flow only occurs in the Alameda Creek flood control channel in Union City about 27 percent of the time (USGS Gages 11179000 and 1180750). Any effects of the proposed project on flow in the reach of Alameda Creek that passes over the Bay plain would be dampened by both inflow from tributaries and outflow to the groundwater basin.

The fourth full paragraph beginning on EIR page 4.6-97 and continuing on page 4.6-98 is deleted:

> ~~The calculated flows for lower Alameda Creek with implementation of the project (both with and without the UACFGP) are within the range of current flows in this segment of the creek. Further, the flood control infrastructure and water supply facilities in lower Alameda Creek were constructed and operational well before the current DSOD restriction on Calaveras Reservoir required the SFPUC to reduce its diversion at the ACDD. Therefore, implementation of the project would not affect the operation of flood control infrastructure and water supply facilities in lower Alameda Creek.~~

The sixth sentence in the first full paragraph on EIR page 4.6-100 regarding flooding effects in the event of dam failure is modified as follows:

> Floodwaters would then continue along Alameda Creek, ~~and~~ spread across the Sunol Valley, and back up several miles in the Arroyo de la Laguna.

Under the heading "Impact 4.6.9: Effects on channel formation and sediment transport along Calaveras Creek," the following text is inserted on EIR page 4.6-103 following the first full paragraph:

> Geomorphologists have concluded that discharges or streamflow with the greatest effect on sediment movement in an alluvial stream usually have a recurrence interval of 1.3 to 1.7 years and correspond to "bankfull" flow. Bankfull discharge or flow is defined as the flow that fills the main channel to the point that water begins to spill out onto the floodplain. The flow regime in the short reach of Calaveras Creek downstream of Calaveras Dam and above Calaveras Creek's confluence with Alameda Creek was altered from its natural condition when construction of a dam at the current dam site began in 1913. The gates to the new dam were first closed in February 1916, and Spring Valley Water Company (the dam's former owner) was able to release stored water for diversion at the Sunol infiltration galleries and delivery to San Francisco. Since 1934, the flow regime has consisted of long periods with no flow in the creek other than seepage around the dam, short periods when precipitation over the reach of the creek below the dam produced runoff, and periods of a few weeks or months every few years when flows of 400 to 600 cfs were released to the creek from Calaveras Reservoir via the cone valve. Sometimes similar amounts of water flowed over the spillway at the same time as the cone valve was operating.
>
> Flows occurring every 1 or 2 years in Calaveras Creek below Calaveras Dam are the result of precipitation over the watershed below Calaveras Dam. They are quite small and almost certainly move less sediment than the large and fairly frequent flows produced by the cone valve releases. The importance of intermediate-range flows in shaping this reach of creek is less than it would be in a creek reach with a more natural flow regime. Regardless of their importance, the intermediate-range flows that occur under the current condition would be altered very little by the proposed project.

Under the heading "Impact 4.6.10: Effects on channel formation and sediment transport along Alameda Creek downstream of the ACDD to the Calaveras Creek confluence," the following text is inserted on EIR page 4.6-104 following the second full paragraph:

> The flow regime in the reach of Alameda Creek downstream of the ACDD and above Alameda Creek's confluence with Calaveras Creek was altered from its natural condition when the diversion dam and tunnel were completed in 1931. Since 1931, the flow regime consisted of long periods with no flow in the creek other than seepage through and around the ACDD, short periods when precipitation over the reach of the creek below the diversion dam produced runoff, and short periods of high or moderate flow when water spilled over the diversion dam. The pattern of flow in the creek depends largely on whether the gates to the tunnel at the diversion dam are open or closed. Prior to the DSOD restriction on the capacity of Calaveras Reservoir, normal operating practice was to keep the gates open during the high flow season and, as a result, only flows in excess of 650 cfs passed over the diversion dam and flowed down Alameda Creek.
>
> It is difficult to characterize the intermediate-range flows occurring every 1 or 2 years in Alameda Creek below the ACDD under the existing condition because no stable pattern of operation of the gates on the diversion tunnel at the ACDD was established between 2001, when the DSOD imposed restrictions on storage in Calaveras Reservoir, and the present. However, for the following reason, it is likely that intermediate-range flows with the proposed project would be similar to those that occur under the existing condition. Under the existing condition, the gates on the diversion tunnel were closed more frequently than they were before 2001 because there was less need to divert water to Calaveras Reservoir under DSOD-restricted storage conditions. With the proposed project, the gates on the diversion tunnel would also be closed more frequently than they were before 2001 because of the ACDD operations plan that is part of the proposed project. Any difference between intermediate-range flows under the existing condition and with the proposed project is probably inconsequential because the importance of intermediate-range flows occurring every 1 or 2 years in shaping this reach of Alameda Creek is less than it would be in a creek reach with a more natural flow regime and a less-rocky substrate. Large, infrequent peak flows are probably the dominant influence on channel form in this reach of the creek.

Under the heading "Impact 4.6.11: Effects on channel formation and sediment transport along Alameda Creek downstream of the Calaveras Creek confluence," the following text is inserted on EIR page 4.6-105 following the first full paragraph:

> The flow regime in the reach of Alameda Creek downstream of the Calaveras Creek confluence was altered from its natural condition more than 90 years ago, when development of a regional water system in the Alameda watershed began. For many decades, the flow regime consisted of long periods with no flow in the creek other than seepage through and around the ACDD and Calaveras Dam, short periods when precipitation over the reaches of Calaveras Creek and Alameda Creek below the dams produced runoff, and short periods of high or moderate flow when water spilled over the dams or releases were made.
>
> Intermediate-range flows occurring every 1 or 2 years in Alameda Creek between the Calaveras Creek and Arroyo de la Laguna confluences almost certainly move less sediment than the large and fairly frequent flows produced when water spills over or is released from the dams. As noted above, the proposed project would not substantially change the intermediate-range flows in Calaveras Creek below Calaveras Dam and in Alameda Creek below the ACDD from those that occur under the existing condition.

Consequently, intermediate-range flows in Alameda Creek below the Calaveras Creek confluence would also not be substantially changed from the existing condition.

In "Impact 4.6.12: Changes in groundwater levels, flows, quality and supplies," the third paragraph on EIR page 4.6-106 is deleted and replaced with the following:

~~Downstream of the Sunol Valley, Alameda Creek recharges the Niles Cone Aquifer. As discussed under Impact 4.6.7, wet weather flows in lower Alameda Creek would be reduced compared to the current baseline and increased in comparison to historical conditions (pre-DSOD restriction) in place at the time of the construction of the diversion facilities in lower Alameda Creek.~~

The ACWD obtains about half of its water supplies from the Niles Cone Groundwater Basin. The groundwater basin is recharged by runoff from the Alameda Creek watershed that percolates into the ground from Alameda Creek as the creek leaves Niles Canyon. The ACWD releases some of its State Water Project water to Arroyo de la Laguna to supplement natural runoff and increase recharge of the Niles Cone Groundwater Basin.

The proposed project would affect flow in Alameda Creek in Niles Canyon. The changes in flow from the existing condition that are attributable to the proposed project, and assuming no UACFGP in the Sunol Valley, would be similar to the average monthly and annual changes in flow shown in Tables 4.6.20 and 4.6.21 (pages 4.6-91 and 4.6-92) for Alameda Creek below its confluence with Calaveras Creek. This is because data from the series of USGS gages on Alameda Creek show that most of the water flowing down Alameda Creek immediately below its confluence with Calaveras Creek reaches Niles Canyon. Consequently, the proposed project would cause average annual flow in Alameda Creek at Niles Canyon to decrease by about 5,000 and 4,700 AF in wet and above-normal years and increase by about 1,000 AF, 5,800 AF, and 6,400 AF in normal, below-normal, and dry years, respectively. Averaged over all years, annual flow would increase by about 670 AF. The proposed project would decrease flow in Alameda Creek at Niles Canyon in some months of wetter years and increase it in most other months. The percentage changes in flow in Alameda Creek in Niles Canyon would be smaller than those shown in Tables 4.6.20 and 4.6.21 because, as a result of tributary inflow, total annual flow in Alameda Creek in Niles Canyon is about three times the average annual flow below its confluence with Calaveras Creek. Overall, the proposed project would have little effect on the availability of water for recharge to the Niles Cone Groundwater Basin and on ACWD's water supply.

The SFPUC plans to build the UACFGP in the Sunol Valley to recover some of the water that would be bypassed or released to Alameda Creek from the ACDD and Calaveras Reservoir. The effects of the UACFGP together with those of the proposed project are described in the cumulative impacts section of this EIR (Vol. 2, Chapter 6, Section 6.2.3.4, pages 6-32 through 6.35). The effects of the UACFGP on the environment, including effects on ACWD's water supply, will be examined in more detail in a separate EIR on that project. The CEQA environmental review of the UACFGP is expected to begin in 2011.

VOLUME 2

Chapter 4, Environmental Setting and Impacts (Continued)

Section 4.7, Water Quality

The first full paragraph on EIR page 4.7-16 is modified as follows:

> A sodium chloride groundwater type predominates along the western margin and center of the Niles Cone groundwater sub-basin near San Francisco Bay but does not extend into the study area. TDS in the groundwater sub-basin ranges from about 286 mg/L to 39,734 mg/L and averages 2,204 mg/L based on data from 113 wells (DWR 2006). The ACWD's groundwater recharge program plays an important role in preventing saltwater intrusion into the Niles Cone Groundwater Basin from San Francisco Bay. Groundwater within the Sunol Valley area is calcium-magnesium bicarbonate water, with concentrations of individual constituents at generally low levels. TDS concentrations are low (from about 350 to 500 mg/L), as are nitrate (NO3) concentrations (from 1 to 6 mg/L), with the exception of some localized and elevated NO3 and TDS concentrations in shallow groundwater due to historical farming and nursery operations (Bookman-Edmonston Engineering 1993, p. 29). Monitoring wells were installed just north of the Alameda Creek and Calaveras Creek confluence for the ACWD groundwater exploration effort in 1986 and some groundwater samples were collected. The constituent concentrations in these samples are shown in Table 4.7.6 and indicate values well within Basin Plan water quality objectives.

The first full paragraph on EIR page 4.7-18 is revised and expanded as follows:

> The NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activit~~y~~ies (or General Permit) ~~are~~ is required for projects that disturb more than 1 acre of land. ~~The current~~ A new ~~General~~ NPDES General Permit that covers stormwater discharges, Order 2009-0009-DWQ, was adopted on September 2, 2009 and went into effect on July 1, 2010. ~~is Order No. 99-08-DWQ~~. This new permit differs from the previous Order 99-08-DWQ in several ways. Among other changes, the new permit revises requirements for monitoring and reporting, specifies minimum BMPs and requirements, uses technology-based numerical action and effluent limits, uses risk-based permitting, and requires preparation of a Rain Event Action Plan.
>
> The new Construction General Permit requires specific minimum BMPs, depending upon a projected sediment risk (Risk Level 1 through 3). Sediment risk is determined based on the sensitivity of the receiving water to sediment and the potential for site erosion and sediment transport. For moderate sediment risk projects (Risk Level 2), Numeric Action Levels (NALs) for turbidity and pH are imposed, and for high sediment risk projects (Risk Level 3), Numeric Effluent Limitations (NELs) for turbidity and pH are imposed. Post-construction stormwater performance standards are also included for sites not covered by a municipal stormwater permit. The Construction General Permit requires effluent and receiving water monitoring (only for some Risk Level 3 sites) to demonstrate compliance with permit requirements, and corrective action must be taken if these limits are exceeded. The results of monitoring and corrective actions must be reported annually to the SWRCB. This permit also specifies minimum qualifications for Storm Water Pollution Prevention Plan (SWPPP) developers and construction site inspectors.

> The NPDES permitting process requires the applicant to file a public Notice of Intent to discharge stormwater and to prepare and implement a ~~Storm Water Pollution Prevention Plan (~~SWPPP~~)~~. The SWPPP includes a site map and a description of proposed construction activities. In addition, it describes the Best Management Practices (BMPs) that will be implemented to prevent soil erosion and discharge of other construction-related pollutants (e.g., petroleum products, solvents, paints, cement) that could contaminate nearby water resources. Permittees are required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and effective in controlling the discharge of stormwater-related pollutants.

The impact conclusion presented in Impact 4.7.1 on EIR page 4.7-42 is revised as follows:

> Given the massive scale of the proposed excavation and spoils hauling and disposal and year-round construction schedule, erosion and sediment discharges during project construction could violate water quality standards and otherwise substantially degrade water quality. As such, the proposed project could have a significant impact on water quality.
>
> In accordance with Mitigation Measure 5.7.1, site-specific BMPs would be implemented consistent with the requirements of the new NPDES General Permit (Order 2009-0009-DWQ; adopted on September 2, 2009) to avoid or minimize water quality impacts from the erosion and transport of sediment, meet Basin Plan water quality objectives, and protect beneficial uses. The implementation of BMPs would occur before construction activity is initiated at a given site. The BMPs would include measures such as, but not limited to, installing silt fences, directing runoff into constructed settling basins, covering stockpiled soils, and locating stockpiled soils away from drainage areas. Silt fences intercept and detain sediment while decreasing the velocity of sheet flow runoff, allowing particles to settle and preventing them from entering water bodies (CASQA 2003).

The title of Impact 4.7.2 on EIR page 4.7-44 is revised as follows:

> Impact on water bodies as a result of a hazardous waste release, NOA or metals release, or sanitary, greywater, or solid waste discharge during construction.

In Section 4.7.2.3, the final paragraph starting on EIR page 4.7-48 and continuing on page 4.7-49 is revised as follows to provide the municipal water quality objective for asbestos and to clarify that the Basin Plan does not establish a surface water quality objective for asbestos:

> Releases of NOA would not exceed Basin Plan water quality objectives for surface water quality, as there is no Basin Plan surface water quality objective for asbestos. However, Basin Plan surface water quality objectives ~~standards~~ exist for several of the metals that may be present in the serpentine rock, including arsenic, copper, chromium, and nickel (Table 4.7.9). The Basin Plan also establishes a municipal supply water quality objective of 7 million fibers per liter of water for asbestos, as well as establishing municipal supply water quality objectives for numerous metals and other water quality parameters (RWQCB 2006, Table 3-5). Releases of NOA and metals could affect beneficial uses including aquatic habitat in Calaveras Reservoir or Alameda Creek and recreation in Alameda Creek. However, releases into Calaveras Reservoir would not affect municipal and domestic water supply, as reservoir water is treated at the SVWTP prior to use. Treatment processes at SVWTP include coagulation, flocculation, sedimentation, filtration, and disinfection, which would remove or substantially reduce concentrations of

asbestos and metals in drinking water to required levels. Furthermore, any elevated concentrations of asbestos or metals in raw water prior to treatment would be expected to be short-term in duration during construction. In general, health concerns related to asbestos and metals in drinking water are related to chronic exposure over extended periods of time. Asbestos exposure in drinking water is not known to cause health problems with short-term exposure (USEPA 2006; Wigle 1977).

The following text is added to the Impact 4.7.2 discussion at the top of EIR page 4.7-54:

Sanitary and Greywater Impacts

Releases of sanitary or greywater waste during construction could be detrimental to water quality if discharged directly or indirectly to receiving waters. The construction period is estimated to be 4 years and would require the presence of construction workers on site throughout that time. Impacts on water quality that could result from the release of untreated sanitary wastewater or greywater include increased fecal coliform bacteria concentrations, elevated nutrients, a decrease in dissolved oxygen, and resulting algal blooms. Without proper facilities, water quality impacts would be significant. With implementation of Mitigation Measure 5.7.1, which includes BMPs to ensure convenient and well-maintained sanitary and greywater facilities, this impact would be less than significant.

The following text is added to EIR Impact 4.7.3 starting on the third paragraph on page 4.7-55:

Constructing the loading docks, loading and unloading the barges, and transporting the materials on the barges across Calaveras Reservoir could temporarily impair water quality in the reservoir. Pile driving would create strong vibrations in and displace bottom sediments, and thereby generate in-reservoir sediment turbidity plumes. Access lanes for the barges might need to be dredged, and maintenance dredging could also be required, particularly on the shallow southern end of the reservoir. Through these construction activities, there is the potential to remobilize copper from sediment into the water column. Copper has been deposited in the reservoir as a result of past use of low doses of copper sulfate by the SFPUC to control the growth of blue-green algae. Such dredging likely would generate the most substantial turbidity plumes but would be of temporary duration. As set forth in Mitigation Measure 5.7.1, the use of suction dredgers instead of clamshell dredging machinery would be required, as suction dredgers would likely reduce the amount of disturbance, the ~~and~~ size of turbidity plumes, and associated remobilization of copper from sediment into the water column. However, the amount of turbidity generated by dredging would remain significant. The potential effects of increased turbidity and remobilization of copper on aquatic habitats would be significant (see Impact 4.5.4 in Section 4.5, Fisheries and Aquatic Habitat).

Barge tugboat motors would stir up sediment in shallow waters and similarly create turbidity plumes. Waves generated by barge wakes could also cause erosion of exposed shores of Calaveras Reservoir, particularly in exposed, soft, saturated soils. Tugboat operations would be a repeated daily occurrence throughout much of the construction period; thus, the impacts on water quality would occur over an extended period. Fine material in the turbidity plumes would slowly settle out, but each operation could renew disturbance.

> The effects of Haul Route Option 2 identified above could have potentially significant impacts on the water quality of Calaveras Reservoir. To reduce these potential impacts, Mitigation Measure 5.7.1 requires that barge and tugboat speeds and no-wake zones be established and enforced to decrease erosion energy and turbidity. During barging operations, all materials would be secured on the barge to prevent discharges to Calaveras Reservoir via wind, and sideboards would also be used to confine clay materials on the barge. Steel decking would be installed over the barge pontoons to minimize the potential for clay materials to be released during barge loading and transport. In addition, Mitigation Measure 5.7.1 states that turbidity would be monitored to assess the effectiveness of control measures. The SWPPP would describe these site-specific monitoring methods. Loading and unloading operations would also be confined to designated areas that would be isolated from the rest of the reservoir by turbidity barriers.
>
> The SWPPP would also specify appropriate construction and material transport and stockpiling practices to reduce the discharge of sediment and other construction materials as well as increases in turbidity of Calaveras Reservoir. These practices would include using drip pans under all vehicles and equipment; ensuring equipment stored or used in streambeds or on docks and barges is not leaking; storing equipment that is not in use away from concentrated flows; providing proper training of staff regarding spill control measures to be employed and reporting any spills; and installing turbidity barriers around the work area during dredging and jetty/dock construction to confine sediments and prevent dispersion throughout the reservoir. Dredged materials would be disposed of immediately and would not be stored or dewatered on site. Dredged materials would also be tested to determine proper options for treatment and disposal if the soil is contaminated.

In Impact 4.7.4, the first full paragraph on EIR page 4.7-58 is revised as follows to describe the municipal water quality objective for asbestos:

> Freshly quarried blueschist containing metals and rock with NOA would be expected to undergo some physical/chemical alteration when placed in continuous contact with the reservoir. Thus, there may be a period when metals are mobilized and temporarily enter the water column. As the rock material weathers and becomes stable, it is likely that the concentrations of metals in the water would eventually drop off to current background levels. The amounts of metals and/or NOA released from hard rocks is likely to be very small compared to that of fill material and weathered rock containing these potential natural contaminants. This is because the total surface area of exposure to the water would be greater in the fill materials. In addition, materials that have been subject to long-term weathering in the dam could have metals that are more readily available for mobilization in comparison to freshly excavated rock. For these reasons, the most important action to be taken to reduce metals/NOA in the water column is the proposed encapsulation of the materials to prevent direct exposure to the reservoir water. It is unlikely there would be any impairment of drinking water beneficial use because, prior to its use, the raw water is treated at the SVWTP, where NOA, metals, and particulate are removed to meet required municipal supply water quality levels, as summarized in the Basin Plan Table 3-5, Water Quality Objectives for Municipal Supply (RWQCB 2006). ~~There is no Basin Plan objective for asbestos.~~ The primary human health concern is with airborne asbestos, not waterborne asbestos.

On EIR page 4.7-72, the first full paragraph under Impact 4.7.7 is modified as follows:

> Construction and operation~~s~~ of the proposed project could affect groundwater quality in the Sunol Valley and Niles Cone. The Niles Cone Groundwater Basin is a potable drinking water source for the ACWD, and this basin is recharged by Alameda Creek watershed runoff and by State Water Project water imported from the Sacramento-San Joaquin Delta to Del Valle Reservoir and then released down the Arroyo de la Laguna to Alameda Creek. The SFPUC places great emphasis on protection of the Alameda Creek watershed as a drinking water source both for its own interests and interests of the ACWD. The SFPUC understands the importance of state and federal Maximum Contaminant Level to drinking water suppliers.
>
> Any construction-related runoff and associated sediment and contaminants that are captured in Calaveras Reservoir during construction (when releases are not being carried out from the base of Calaveras Reservoir) would ~~are considered to~~ have a less-than-significant impact on groundwater quality. For asbestos in particular, while fibers may be carried long distances by water before settling, they do not migrate to groundwater through soils (USEPA 2006). Construction-related contaminants or sediments mobilized downstream of Calaveras Dam during storm events could be carried downstream and affect groundwater quality. The extent to which metals and construction-related contaminants could be mobilized and transported into groundwater is uncertain with available data. It is possible that contaminant plumes in groundwater related to spills or elevated natural metals could occur during construction near the reservoir and in Calaveras Creek, and therefore a conservative assessment suggests that this would be a potentially significant impact. Implementation of a SWPPP that contains, at a minimum, the project-specific BMPs set forth in Mitigation Measure 5.7.1 would reduce the potential impacts on groundwater quality due to the release of hazardous materials, NOA, and metals during construction to less-than-significant levels.

The following paragraph is inserted on EIR page 4.7-74 following the second full paragraph:

> Operation of the proposed project would have little or no effect on surface and groundwater quality in the Alameda Creek watershed. The only changes attributable to the proposed project that could potentially have an effect on water quality are those associated with reservoir releases and streamflow. The changes in flow would be too small to have a substantial effect on water quality in Alameda Creek except for water temperature. Water temperature in Alameda Creek would be reduced in some months when reservoir releases that are part of the proposed project would increase streamflow compared to the existing condition; this reduction in water temperature would be beneficial to coldwater habitat for fish but would not affect the suitability of water percolating into the Niles Cone for water supply purposes. Operation of the proposed project would have less-than-significant impacts on the quality of both surface and groundwater.

Section 4.9, Hazards and Hazardous Materials

The first and second paragraphs on EIR pages 4.9-23 and 4.9-24 are revised as follows to provide clarification, including the additional dust control measures specified in the updated BAAQMD CEQA Guidelines, removal of references to temporary park closures, and to provide clarification regarding the off-site transport of asbestos containing materials.

Impacts to On-Site Workers, ~~and~~ Recreational Users, Visitors, Employees, and Park Employees During Excavation, Tunneling, Blasting, Hauling, and Placement

Project-related activities that could produce dust containing NOA and naturally occurring metals include excavation and handling of approximately 4 million cubic yards of Franciscan Complex serpentinite and mélange rock as well as colluvium, alluvium, topsoil, and fill derived from these rock types for construction (of the dam, spillway, Borrow Area B, Disposal Sites 3 and 7, stilling basin, tunnel and adits, and access roads) as well as the removal of the upper portion of the existing dam where some of the fill materials were obtained from serpentinite and mélange as described in the Setting. Use of haul roads constructed within these rock types on the hillside to the west of the existing dam where Franciscan Complex serpentinite and mélange bedrock are mapped (see Figure 4.8.1, in Section 4.8, Geology, Soils, and Seismicity) and placement of surplus rock (including tunnel spoils) could also generate NOA and metals-containing dust. In addition, excavation of Borrow Area B and the stilling basin would require blasting of Franciscan Complex serpentinite and mélange bedrock, and construction of the intake/outlet shaft and adits would require tunneling through Franciscan serpentinite and mélange. Dust and tunnel emissions generated during these construction activities would contain NOA and naturally occurring metals that could be inhaled by construction workers, ~~and~~ recreational users, visitors, residents, and park employees ~~including bicyclists on Calaveras Road~~. Because of the volume of material disturbed and the proximity of potential receptors~~recreational users~~, ~~potential~~ impacts related to exposure of workers, ~~and~~ recreational users, visitors, residents, and park employees to NOA and naturally occurring metals in dust during construction are considered significant.

Impact Conclusion

For recreational users, visitors, residents, and park employees, these impacts would be reduced to less than significant with implementation of Mitigation Measure 5.9.2a, which requires the construction contractor to comply with the BAAQMD's Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations and to implement dust control measures specified in the 2010 BAAQMD California Environmental Quality Act Air Quality Guidelines. Because the construction activities would disturb more than one acre of land, the contractor would be required to submit the appropriate notification forms and prepare an ~~a~~Asbestos Dust Mitigation Plan specifying measures that would be taken to ensure that no visible dust crosses the ~~air monitoring~~ ~~perimeter of~~ work area boundary ~~limits~~ during construction. The "work area boundary" is the limits of the active work areas of the project, within which soil and rock will be disturbed during construction. Mitigation Measure 5.9.2a also requires the SFPUC to prepare and implement a Comprehensive Air Monitoring ~~Plan~~ Program specifying the air quality monitoring that would be implemented by a third party consultant qualified in ambient air monitoring under the supervision of a Certified Industrial Hygienist who is also a California Certified Asbestos Consultant or who has current 40-hour AHERA training to ensure compliance with the Asbestos ATCM. The Comprehensive Air Monitoring Program would identify a "control boundary" which will encompass the work area boundary and lie entirely within the property boundary and will be the boundary at which CDRP-generated emissions of NOA/metals will be controlled. The Comprehensive Air Monitoring ~~Plan~~ Program would require daily ~~both~~monitoring to be conducted at: (1) perimeter monitoring locations~~the air monitoring perimeter of work limits~~; ~~an~~(2) construction activity monitoring of specific ~~cells of construction activity~~ areas within the work area boundary; and (3) ambient air monitoring at locations in the vicinity of the project and Sunol Regional Wilderness Area

> that are outside the control boundary. The Comprehensive Air Monitoring ~~Plan~~ Program would specify the location and frequency of monitoring, risk-based trigger levels of asbestos and metals (including chromium, nickel, arsenic, copper, and cobalt) that would be protective of off-site receptors (e.g., recreational users of Calaveras Road and/or nearby trails in the Sunol Regional Wilderness ~~a~~Area, visitors, residents, and park employees), and corrective actions to be taken should ~~the acceptable level of asbestos or metals~~ risk-based trigger levels be exceeded at ~~any~~ a perimeter monitoring location. Should trigger levels be exceeded at a perimeter monitoring location, the SFPUC would notify the appropriate authorities, ~~and implement corrective actions~~ ~~including possible closure of the affected road or trail~~, investigate the cause of the exceedance, and implement corrective actions such as implementation of enhanced dust suppression techniques. Should corrective action fail to bring asbestos or metals concentrations to within the trigger levels~~acceptable limits~~, the Comprehensive Air Monitoring ~~Plan~~ Program would require the contractor to modify or temporarily halt construction activities in areas generating excessive dust until dust generation could be maintained within the trigger ~~acceptable~~ levels.
>
> Mitigation Measure 5.9.2b requires the construction contractor to comply with 8 CCR Section 1529, Construction Safety Orders for Asbestos, with additional worker protection measures for the proposed project. The additional worker protection measures would be within the oversight of the third party consultant required under Mitigation Measure 5.9.2a. These additional requirements have been developed in consultation with the SFPUC, the San Francisco Department of Public Health, and Cal/OSHA (URS 2009b), and address educational and training requirements for supervisory staff, personal air monitoring and respiratory protection requirements, acceptable work practices, signage, and personnel decontamination. These modifications would be incorporated into the Contract Documents for the construction project and all workers with the potential to be exposed above permissible exposure limits for asbestos would be required to follow these requirements.

The last paragraph on EIR page 4.9-28 is revised as follows:

> Implementation of Mitigation Measure 5.9.5, which requires legal disposal of electrical equipment containing PCBs as well as fluorescent light tubes and ballasts at a permitted off-site facility, would reduce this impact to a less-than-significant level.

Section 4.12, Transportation

Text describing the roadway network in the last sentence on EIR page 4.12-1 is revised as follows:

> Access to I-680 in the project area is via on- and off-ramps at Calaveras Road and Paloma Way in Alameda County, and East Calaveras Boulevard in the City of Milpitas and Santa Clara County.

The last sentence in the first paragraph on EIR page 4.12-8 is revised as follows:

> This segment of Calaveras Road would be open on all major holidays ~~state and national holidays~~.

The following paragraph is added as the second paragraph on to EIR page 4.12-13:

> In Milpitas, Calaveras Road between Evans Road and Ed R. Levin County Park has a truck weight restriction of 3 tons. It is anticipated that some construction equipment weighing more than 3 tons would need to be trucked to Borrow Area E. These trucks would be considered local traffic, and would be exempt from the 3-ton weight restriction. In general, the construction contractor would be required to obtain appropriate permits from Santa Clara County.

Section 4.13, Air Quality

The second and third full paragraphs on page 4.13-44 of the EIR are modified to read as follows.

> As discussed above, on June 2, 2010 the BAAQMD ~~is considering the future adoption of quantitative~~ adopted CEQA thresholds of significance for construction-related air quality impacts. Although construction emission thresholds are provided for criteria pollutants and risks and hazards, none are provided for GHG emissions (BAAQMD 2010a). However, at the time the Draft EIR was prepared in 2009, ~~At present,~~ two quantitative options ~~are~~ were under consideration for construction-related GHG emission thresholds (BAAQMD 2009). Option 1 ~~is~~ was based on the total construction-related CO_2e emissions over the duration of project construction. Under this option, a project would have a significant impact if its total emissions of CO_2e over the duration of construction exceed 35,250 metric tons (MT) (equivalent to 35,560 standard 2,000-lb tons). Option 2 under consideration was ~~is~~ based on daily construction emissions of CO_2e. Under this option, a project would have a significant impact if daily construction emissions exceed 10 MT per day (equivalent to 11 standard tons). ~~In anticipation of the future implementation of proposed new BAAQMD CEQA thresholds of significance for GHG emissions, this EIR provides an analysis of the project's construction GHG emissions under each of the proposed thresholds of significance identified above.~~
>
> Based on the worst-case analysis above, construction-related GHG emissions were calculated to be approximately 21 tons ~~MT~~ per day CO_2e (19 MT) and 24,012 tons ~~MT~~ CO_2e (21,779.6 MT) over the duration of construction (a maximum of 6,003 tons ~~MT~~ CO_2e per year multiplied by the 4-year construction schedule). Actual emissions would not reach worst-case levels on a daily basis; therefore, total emissions would likely be much less than 24,012 MT CO_2e over the duration of the project. Nevertheless, even under this worst-case scenario, emissions would not exceed 35,250 MT CO_2e. Therefore, project emissions would not be anticipated to exceed the total construction emissions threshold of 35,250 MT CO_2e under the proposed 2009 draft threshold Option 1; however, the project would be likely to exceed the daily threshold of 10 MT CO_2e under the 2009 draft threshold Option 2. Implementation of the BAAQMD exhaust and diesel PM controls identified in Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b would reduce project-related GHG emissions. The exact reduction percentage cannot be calculated at this time; however, even with these reductions, construction-related emissions of GHG would likely still exceed the 2009 draft daily threshold of significance of 10 MT per day CO_2e. No other feasible mitigation exists that would reduce construction-related emissions of GHG to below ~~the~~ this BAAQMD 2009 draft daily threshold of significance. Therefore, if the 2009 draft daily threshold of significance had been adopted by BAAQMD, construction-related emissions of GHGs would have been considered a potentially significant and unavoidable impact. ~~s on climate change in accordance with the proposed Option 2, BAAQMD threshold of significance.~~

> However, the BAAQMD CEQA Thresholds of Significance adopted on June 2, 2010 do not identify a quantitative GHG threshold for construction emissions; instead, the 2010 guidelines encourage incorporation of best management practices to reduce GHG emissions during construction (BAAQMD 2010a). As described above, because project construction would conform to the requirements of the EAMs pursuant to the California Global Warming Solutions Act of 2006 and with the CCSF and SFPUC GHG reduction actions, the project would incorporate best management practices to reduce GHG emissions during construction, and impacts related to construction GHG emissions would be considered less-than-significant.

The following new reference is added to EIR page 4.13-45 after the seventh listed reference to support the revised discussion above:

> Bay Area Air Quality Management District (BAAQMD). 2010a. California Environmental Quality Act, Air Quality Guidelines. San Francisco, CA.

Chapter 5, Mitigation Measures

Section 5.3, Land Use

Mitigation Measure 5.3.6 on EIR pages 5-1 –5-2 is revised as follows:

> **5.3.6 AMGEN and Primavera Bicycling Tours ~~of California~~**
>
> The San Francisco Public Utilities Commission (SFPUC) shall coordinate with the organizers of the AMGEN Tour of California bicycle tour and the Fremont Freewheelers Bicycle Club Primavera bicycle tour to ensure that temporary road closures, haul truck traffic, and other activities related to project construction will not interfere with these tours. Construction activities may be temporarily suspended as needed to prevent conflicts with the AMGEN and Primavera bicycle tours.

Section 5.4, Vegetation and Wildlife

The third bulleted item on EIR page 5-2 is revised as follows:

- **Worker Education Program.** A worker education program shall be implemented to familiarize workers, including all vehicle operators, of the importance of avoidance of harm to special-status species and sensitive natural communities. The training shall include a discussion of the importance of maintaining speed limits, appropriate disposing of trash and waste materials, and respecting exclusion zones. The SFPUC and its construction contractor shall confirm that all workers have been trained appropriately.

In Mitigation Measure 5.4.1a, the first three paragraphs under the bulleted item "Other Tree-Nesting Raptor Pre-construction Survey" on page 5-5 of the EIR are modified to explicitly cover bald eagles, and peregrine and prairie falcons as follows:

- **Other Tree- or Cliff-Nesting Raptor Pre-construction Survey.** A survey to identify active nests for tree- or cliff-nesting raptors (~~other than~~ including bald eagles) will be conducted by a qualified biologist no more than 2-weeks before the start of construction at project sites from February 1 through July 30.

Active raptor nests located within 500 feet (0.25 mile for golden eagle and bald eagle or falcons) of the project will be mapped, to the extend allowed by access.

If an active bald eagle nest is found, implement nest protection measures described previously for bald eagles. If an active raptor nest is found within 500 feet (0.25 mile for golden eagle or falcons) of the project, a determination will be made by a qualified biologist, in coordination with the CDFG, as to whether or not construction work will affect the active nest or disrupt reproductive behavior. Criteria used for this evaluation will include, but not be limited to, presence of visual screening between the nest and construction activities, and behavior of adult raptors in response to the surveyors or other ambient human activity. Alternatively, other appropriate avoidance measures, as approved by CDFG may be implemented to ensure that the nest is protected. If it is determined that construction will not affect an active nest or disrupt breeding behavior, construction will proceed without any restriction or mitigation measure. If it is determined that construction will affect an active raptor nest or disrupt reproductive behavior, then avoidance is the only mitigation available. Construction will be delayed within 300 feet (0.25 mile for golden eagle or falcons)…

The last bullet on EIR page 5-7 and the first bullet on page 5-8 are revised as follows:

- **Wetland Soils and Vegetation**. To minimize the degradation of saturated wetland soils and vegetation where avoidance is not practicable, protective practices such as use of geotextile cushions and other materials (e.g., timber pads, prefabricated equipment pads, thick vegetative slash, geotextile fabric free of plastic monofilament and nylon wire) and/or vehicles with balloon tires will be employed.
- **Streams and Drainages**. Stabilize banks of all streams and drainages disturbed during construction, including banks of Alameda and Calaveras Creeks, using a non-vegetative material that will protect the soil from erosion by wind or water initially and break down within a few years (e.g., jute matt). To minimize entrapment of amphibians and snakes, any geotextile fabrics used shall be free of plastic monofilament and nylon wire. If visual evidence of erosion (e.g., rilling or scour) is observed, geotextile mats, excelsior blankets, or other soil stabilization products shall also be used.

The second bullet on EIR page 5-8 is revised as follows:

- **Vegetation Removal**. During construction, immediately remove trees, shrubs, debris, soils, or construction materials that are inadvertently deposited below the ordinary high-water mark of any streams, drainages, ponds, wetlands, riparian areas, and Calaveras Reservoir in a manner that minimizes disturbance of the drainage bed and bank (e.g., manually). Such materials will be ~~set back at least 10 feet from Calaveras Reservoir and from streams, drainages, ponds, wetlands, and riparian areas that are not otherwise directly disturbed by construction~~ placed either in soil stock piles or appropriately managed waste collection containers until the materials can be properly disposed of.

The text of Mitigation Measure 5.4.2a on EIR page 5-9 is revised as follows:

5.4.2a Habitat Restoration Goals and Objectives

Timeframes provided for the following goals and objectives are the goals for meeting success criteria, not for initiating restoration actions. Replanting and grading would begin as soon as practicable, but no later than one year following completion of construction.

- Restore temporary impacts on wetlands~~,~~ and streams ~~and riparian habitat~~ located above the 756-foot inundation elevation within the reservoir, as well as downstream of the replacement dam and within the limit of work at Calaveras Creek…

The text on EIR page 5-10 is revised as follows:

5.4.3a Compensation Goals and Objectives

Timeframes provided for the following goals and objectives are the goals for meeting success criteria, not for initiating compensation actions. Replanting and grading would begin as soon as practicable, but no later than one year following completion of construction.

On EIR page 5-11, the first sentence in Mitigation Measure 5.4.3a for California red-legged frog habitat is revised as follows:

> … fully compensate for any loss of California red-legged frog at the Alameda Creek Diversion Dam (ACDD) and breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek…

On EIR page 5-11, Mitigation Measure 5.4.3a for foothill yellow-legged frog habitat is revised as follows:

> … fully compensate for any loss of foothill yellow-legged frog at the ACDD and for the loss of 9,421 linear feet of habitat in Arroyo Hondo, and fully compensate for any loss of breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek…

Mitigation Measure 5.4.3h is revised as shown below to include example success criteria that may be included in the final compensation plan(s):

> The final compensation plan(s) shall include ecologically based criteria that will be used to determine whether the compensation projects are achieving their objectives. The success criteria shall be ~~based on attributes that are objective and verifiable.~~ assessed by comparing performance during the monitoring period against objective and verifiable, ecologically-based success criteria which reflect the Goals and Objectives of the site. The type of language that will be included in the final MMPs under success criteria are described below. The final success criteria shall provide additional detail and specificity as needed to determine whether compensation objectives are achieved in accordance with resource agency permitting requirements.

For example, these success criteria may include, but are not limited to these requirements:

- Absolute vegetation cover of each established wetland feature shall comprise at least 70 percent by year 5.
- Absolute cover of target invasive plant species shall not exceed 5 percent total cover by year 5.
- Survival of planted oaks shall be at least 30 percent by year 10.
- Planted vegetation will be fully established (i.e. not require irrigation and be self sustaining) at the end of the monitoring period.

Section 5.7, Water Quality

In Mitigation Measure 5.7.1, Storm Water Pollution Prevention Plan, the first two paragraphs of the measure on EIR page 5-18 are revised and expanded as follows:

> Consistent with the requirements of the State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activit~~y~~ies (Order 2009-0009-DWQ; adopted on September 2, 2009), the SFPUC shall undertake the proposed project in accordance with a project-specific ~~Storm Water Pollution Prevention Plan (~~SWPPP~~)~~. The San Francisco Bay Regional Water Quality Control Board (RWQCB), the primary agency responsible for protecting water quality within the project area, is responsible for reviewing and ensuring compliance with the SWPPP. This review is based on the general permit issued by the State Water Resources Control Board.
>
> The recommended Best Management Practices (BMPs), subject to review and approval by the RWQCB, include the measures listed below. However, the measures themselves may be altered, supplemented, or deleted during the RWQCB's review process, since the RWQCB has final authority over the terms of the SWPPP.

The second bullet under "Erosion and Sediment Controls" on EIR page 5-19 is revised to read:

- Install weed-free fiber rolls, straw-wattles, coir logs, silt fences, or other effective devices along drainage channels to prevent soils from moving into creeks.

The third bullet at the top of EIR page 5-21 is revised and new text is added, as follows:

- An off-site project may be required if an unusual storm event occurs and water discharges have not settled to avoid significant sedimentation from reaching Alameda Creek or its tributaries. All other mitigation measures to protect water quality from stormwater impacts would be implemented before the RWQCB would consider off-site mitigation. Off-site erosion control projects may include gully repairs, stream bank stabilization, slide repairs, or other actions acceptable to the RWQCB. The RWQCB may determine through the permitting process that an off-site erosion control project within the Alameda Watershed could be required to offset impacts on water quality. The RWQCB will determine appropriate drainage and runoff treatment controls as part of the SWPPP review and 401 Water Quality Certification permitting process.

Off-site mitigation opportunities have been identified so that they can be implemented as quickly as possible in the event that an impact occurs. The off-site mitigation project for stormwater impacts, contingent upon a 10-year storm event resulting in the release of untreated water from runoff and dewatering activities, would be identified in coordination with the RWQCB. Examples of potential erosion and sediment management projects include funding identified Natural Resources Conservation Service proposed projects along Arroyo de la Laguna or implementing a mitigation site in the Sunol Valley, where several opportunities for erosion and sediment management have been identified. In the event that off-site stormwater control projects are implemented, impacts of off-site mitigation on water quality, sensitive wildlife, and archaeological resources will be minimized and avoided through implementation of Mitigation Measures 5.4.1, 5.4.2, 5.7.1, 5.10.2, and 5.10.5. Also, surveys for archaeological resources will be conducted prior to commencing work on the projects.

The discussion of “Hazardous Materials Handling Near Water” on EIR pages 5-22–5-23 is revised as follows:

Hazardous Materials Handling Near Water (includes measures for barges, if selected)

- In the SWPPP, specify appropriate construction and material transportation and stockpiling practices to reduce the potential for discharging sediment and other construction materials into Calaveras Reservoir or for ~~in~~decreasing turbidity related to barging and the construction of temporary docking facilities (if used):
  - When not in use, store pile-driving equipment away from concentrated flows of stormwater, drainage courses, and inlets. Protect hammers and other hydraulic attachments from runon and runoff by placing them on plywood and covering them with plastic or a comparable material prior to the onset of rain.
  - Place drip pans under all vehicles and equipment on docks, barges, or other structures over water bodies when the vehicle or equipment is expected to be idle for more than 1 hour.
  - Identify types of spill control measures to be employed, including the storage of materials and equipment. Ensure that staff is trained regarding the use of the materials, deployment and access of control measures, and reporting measures.
  - Use suction dredging, if feasible, to construct barge access channels.
  - Install a turbidity barrier around the work area during lane dredging and during the installation of jetties or docks and anchors.
  - Place dredged material directly into haul trucks that will dispose of the materials. Use lined haul trucks to prevent leaks or spills of sediment-laden water from dredged material. Do not allow temporary storage or dewatering of dredged spoils on site.
  - Test dredged materials during construction, and dispose of contaminated materials only at approved disposal facilities.
  - Establish and enforce barge and tugboat speeds and no-wake zones to decrease disturbance, erosional energy, and turbidity.

- Maintain equipment that is stored or used in streambeds or on docks, barges, or other structures over water bodies to prevent leaks of oil, grease, fuel, coolants, and hydraulic fluids.
- Secure all materials on the barge to prevent discharges to receiving waters via wind.
- Install steel decking over the barge pontoons to minimize the potential for clay materials to fall into the reservoir during transport and loading.
- Use sideboards to confine the clay materials on the barge and prevent the material from falling off the edge of the barge.
- Perform loading and unloading of the barges within designated areas that are isolated from the rest of the reservoir by turbidity barriers.
- Use barges / tug boats with dry exhaust systems and/or four-stroke engines to minimize combustion byproducts from entering the reservoir.

The following text, consistent with the recommendations of the California Stormwater Quality Association (CASQA 2003), is added to EIR page 5-23 prior to the "Solid Waste Management" heading:

Sanitary and Greywater Waste Management

- Provide temporary sanitary facilities for construction workers that completely contain all sanitary and greywater waste produced at the construction site with the waste trucked to an appropriate disposal site.
- Locate facilities in convenient locations.
- Locate temporary sanitary facilities away from drainage facilities, watercourses, and traffic circulation.
- Secure temporary sanitary facilities to prevent overturning when subjected to high winds or risk of high winds.
- Use only reputable, licensed sanitary waste haulers.
- Maintain sanitary facilities in good working order and arrange regular collection to prevent overflows.
- Require regular maintenance of facilities and inspect facilities weekly during the rainy season and at two-week intervals in the non-rainy season to verify proper maintenance.

The second bulleted item under "Equipment Washing" on EIR page 5-23 is revised to read:

- Wash equipment off site, except when on-site washing is required to reduce hazards associated with NOA. Prior to first use on the CDRP, equipment shall be washed to remove debris that could be a source of foreign contaminants such as non-native invasive plant seeds or propagules. If equipment must be washed on site, then only water may be used. Do not use soaps, solvents, degreasers, steam cleaning, or other similar products or methods unless all of the discharge is collected for appropriate off-site disposal.

The second bullet under "Post-Construction Site Restoration and Stabilization" on EIR page 5-24 is revised to read:

- Prepare and implement a detailed re-vegetation plan to ensure that appropriate plant cover (i.e., no invasive non-native plant species) becomes established in disturbed areas. This plan will identify measures to establish vegetation by planting, seeding, and irrigation, if necessary. The restoration plan will specify slope inclination and permanent drainage swales and berms to mitigate erosion of the disposal fills.

The last bullet under "Monitoring and Reporting" on EIR page 5-25 is revised as follows:

Monitoring and Reporting

- During construction, ~~N~~notify the RWQCB, Alameda County Water District, Alameda County Environmental Health Services Department, ~~and~~ East Bay Regional Park District, and the Alameda County Flood Control and Water Conservation District in the event of elevated turbidity or a spill or release of contaminants, NOA, or metals to any waterways in the Alameda Creek system.

The following text is added after the fourth bullet under "Monitoring and Reporting" on EIR page 5-25:

IMPACTS OF IMPLEMENTING PROPOSED MITIGATION

Implementation of off-site erosion control projects, if required, could require the use of mechanized equipment in sensitive habitats and the temporary dewatering of aquatic habitat. Implementation could affect special-status species and water quality and could have temporary construction-related impacts. These impacts will be minimized and avoided through the prevention of the discharge of pollutants and by incorporating measures to protect and maintain water quality described in Mitigation Measure 5.7.1, including the preparation and implementation of a SWPPP and associated BMPs.

Impacts on sensitive wildlife would be avoided through the preconstruction surveys and avoidance measures for the California red-legged frog, California tiger salamander, and western pond turtle described in Mitigation Measure 5.4.1. Mitigation Measure 5.4.1 is applicable to both on-site construction and off-site mitigation areas. Temporary impacts will be restored by incorporating measures described in Mitigation Measure 5.4.2.

Impacts could occur if off-site erosion control projects occur in an area with near-surface archaeological resources. If present, archaeological resources could be disturbed by various erosion control activities, such as grading for stream bank stabilization or digging for slide or gully repairs. Disruption of archaeological resources, if present within the off-site erosion control project area, could impair the potential of such resources to yield information important to prehistory and history. Although an Archaeological Survey Report was completed for the proposed project and for the Biological Mitigation Areas, the potential areas identified for off-site erosion control projects are not finalized at this time and likely have not been surveyed for archaeological resources. Prior to commencing an off-site erosion control project, the site would be surveyed for archaeological resources in accordance with the procedures described in the San Francisco Planning Department WSIP Archaeological Guidance document, including preparation of: a CEQA Area of Potential Effects Report; Archaeological Survey Plan;

and Historic Context and Archaeological Survey Report for the review and approval of the Planning Department's Environmental Review Officer or designee. In addition, Mitigation Measure 5.10.2, Accidental Discovery Measures, which establishes procedures to be implemented in the event of accidental discovery of unknown archaeological resources during construction, and Mitigation Measure 5.10.5, Paleontological Resources, which requires training on identification of fossil materials resources during construction and preconstruction assessment, resource avoidance and/or salvage and monitoring in areas of high paleontological sensitivity, would be implemented.

The use of heavy equipment for excavation and grading and trucks to haul excess spoils offsite from offsite erosion control projects would generate criteria pollutants and particulate matter from diesel exhaust and fugitive dust. Although these emissions would be substantially lower than the emissions generated by construction of the CDRP, the same mitigation measures required for project construction would be applied to reduce emissions from implementation of the habitat compensation activities. Implementation of Mitigation Measures 5.13.1a, 5.13.1b, 5.13.3a and 5.13.3b (as applicable) would reduce air quality impacts related to any offsite erosion control projects to a less-than-significant level.

Overall, implementation of any offsite erosion control projects would not result in any additional significant impacts beyond those disclosed for the CDRP or an increase in the severity of a significant impact. Implementation of mitigation measures identified in the EIR for the CDRP where applicable would reduce all associated impacts to a less than significant level.

Section 5.9, Hazards and Hazardous Materials

Mitigation Measure 5.9.2a on EIR pages 5-27 – 5-30 is revised as follows to provide clarification regarding the additional dust control measures and the off-site transport of asbestos containing materials:

5.9.2a Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring ~~Plan~~ Program

The SFPUC shall prepare an ~~a~~Asbestos Dust Mitigation Plan for approval by the Bay Area Air Quality Management District (BAAQMD) as required in Section 93105 of Title 17 of the California Code of Regulations, "Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations." The SFPUC shall also prepare a Comprehensive Air Monitoring Program that shall be submitted for review by the BAAQMD. The Asbestos Dust Mitigation Plan shall specify site-specific measures that ~~would~~ will be ~~taken~~ implemented to minimize emissions of naturally occurring asbestos (NOA) and metals-containing dust. Risk-based trigger levels will be utilized during construction to evaluate whether additional dust control measures are required so that the project does not cause unacceptable off-site exposure ~~and to ensure that~~ to airborne asbestos and metals (including chromium, nickel, arsenic, copper, and cobalt).~~ concentrations do not exceed regulatory approved risk-based trigger levels at the air monitoring perimeter of work limits during construction.~~ Off-site exposure will be evaluated for receptors that are located beyond the control boundary, which in turn, entirely encompasses the work area boundary of the project.[3] The SFPUC shall include all applicable ~~dust mitigation~~ measures set forth in the Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program in the construction contract for the project.

The SFPUC ~~would~~ shall also engage a third party consultant that would provide review and monitoring of the construction contractor's air monitoring activities, other ~~NOA-~~related construction contractor worker protection measures, and the construction contractor's NOA soil and rock evaluations for compliance with contract requirements. The consultant ~~would~~shall also conduct the comprehensive air monitoring required by the Comprehensive Air Monitoring ~~Plan~~ Program (described below). The third party consultant ~~would~~shall be qualified in ambient air monitoring under the supervision of a Certified Industrial Hygienist who is also a California Certified Asbestos Consultant or who has current 40-hour AHERA training.

Examples of dust control measures that may be implemented include the measures identified in the Asbestos Airborne Toxics Control Measure (ATCM) and the 2010 BAAQMD California Environmental Quality Act Air Quality Guidelines, as well as project-specific measures to be included in the Asbestos Dust Mitigation Plan. As provided for in the Asbestos ATCM, alternative measures that provide an equivalent level of dust control may be included in the Asbestos Dust Mitigation Plan subject to BAAQMD authorization. The Asbestos ATCM and the BAAQMD Air Quality Guidelines include~~s~~ the following dust control measures ~~for~~ applicable to construction activities in NOA containing areas:

- Restriction of vehicle speeds on on-site unpaved roads, staging areas, and parking lots to 15 miles per hour; as well as wetting, use of a chemical dust suppressant, or use of a gravel cover containing less than 0.25 percent asbestos or other effective measures in these areas to control dust generation;
- Wetting all exposed surfaces at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe;
- Wetting of work surfaces prior to and during construction activities and suspension of grading operations when wind speeds are high enough to result in visible dust emissions crossing the ~~air monitoring perimeter of work limits~~ work area boundary that would incorporate all active work areas;
- Suspension of all excavation, grading, and/or demolition activities when average wind speeds exceed 20 mph;
- Wetting or use of a cover to control dust from active storage piles;
- Wetting, use of a chemical dust suppressant, use of a cover (such as a tarp or vegetative cover), establishment of a surface crusting, use of wind barriers or other effective measures to control dust from inactive storage piles and inactive work areas;
- ~~Cleaning of all visible track-out on paved public roads at the end of the work day or at least once per work day;~~
- Removal of all visible mud or dirt track-out onto adjacent public roads using wet power vacuum street sweepers at least once per work day. The use of dry power sweeping is prohibited;

- Implementation of track-out prevention measures such as a gravel pad, wheel wash system, use of a paved approach, or other equally effective measures to prevent and control track-out to a public road;
- Loading of trucks for ~~off-site~~ transport of NOA-containing materials outside the work area boundary such that no spillage could occur, as well as wetting the load, covering it with a tarp and loading the truck such that material does not touch the front, back, or sides of the cargo compartment at any point less than 6 inches from the top and that no point in the load extends above the top of the cargo compartment (note that this measure is included for completeness to be consistent with the Asbestos ATCM, but would not be required for the proposed project because no NOA-containing materials would be transported outside the work area boundary as part of the project); ~~and~~
- Limiting the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time. Activities shall be phased to reduce the amount of disturbed surfaces at any one time;
- Paving all roadways, driveways, and sidewalks planned for paving as soon as possible after the start of construction;
- Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used;
- Washing all trucks and equipment, including tires, such that they shall be free of NOA, prior to leaving the site;
- Post-construction stabilization of disturbed areas with vegetative ground cover (fast-germinating native grass seed), placement of at least 3 inches of non-asbestos containing material, paving, or any other measure deemed sufficient as soon as possible and water appropriately until vegetation is established; ~~to prevent wind speeds of 10 miles per hour or greater from causing visible dust emissions.~~
- Treating site accesses to a distance of 100 feet from the paved road with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel;
- Posting a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations; and
- Restricting blasting activities in areas of NOA and metals to daylight hours Monday through Friday and when average wind speeds are ~~less than~~ 20 miles per hour or less.

If needed for adequate dust control, t~~T~~he Asbestos Dust Mitigation Plan ~~may~~shall also include additional project-specific dust control actions (enhanced measures) for general construction activities, drilling, blasting, rock processing, tunneling, and dam foundation cleaning activities to prevent ~~NOA and metals~~ visible dust from migrating beyond the ~~project site~~ work area boundaries. Enhanced measures would also be implemented if daily air monitoring detects an exceedance of the established trigger levels at a perimeter monitoring location. Examples of possible ~~These~~ actions include:

- ~~Washing of equipment used in NOA-disturbing activities after use and prior to removing it from the site;~~

- Increased frequency of ~~S~~sweeping all paved access roads, parking areas, and staging areas daily;
- Reducing wind speeds to soil surfaces (by using a wind screen or changing the shape or orientation of the stockpile) to control dust from active storage piles;
- Drilling with water in NOA-containing areas;
- ~~Restricting blasting activities in areas of NOA and metals to Monday through Friday;~~
- Wetting blast areas as feasible, before, during, and after the blast;
- Using blasting blankets as feasible;
- Continuous misting or using an equivalent water application technique during the cleaning of the dam foundation and processing of earth and rockfill materials for the new embankment where NOA- and metals-containing rock is present;
- Wetting the adit and shaft work surfaces and materials when tunneling in NOA and metals-containing rock, as well as materials derived from these activities;
- Prohibiting the use of compressed air for drilling and foundation cleaning and the use of air-driven jack hammers for any activities disturbing NOA-containing rocks unless measures are implemented to capture or control airborne dust generated by the process;
- Applying water whenever NOA-containing materials are being removed from the tunnel or adits by mechanical processes such as shovels, excavator buckets, and hydraulic breakers; and/or
- Using a treatment system such as a baghouse or HEPA-type filtering device to remove NOA-containing dust from the tunnel exhaust air.

The measures in the Asbestos Dust Mitigation Plan may be altered, supplemented, or replaced during the BAAQMD's review process, since the BAAQMD has final authority over the terms of the Asbestos Dust Mitigation Plan.

The SFPUC shall prepare and implement a Comprehensive Air Monitoring ~~Plan~~ Program that ~~would~~ will describe monitoring that ~~would~~will be conducted to demonstrate compliance with the Asbestos ATCM. The plan ~~would~~will specify ~~two~~ three types of daily monitoring: 1) air monitoring to be conducted at the perimeter monitoring locations (locations along or within the control boundary) ~~air monitoing perimeter~~; ~~and~~ 2) construction activity area monitoring of specific ~~cells of~~ construction ~~activity~~ activities within the work area boundary to provide an added level of analysis ~~and control of dust generation~~ during construction; and 3) ambient air monitoring at locations in the vicinity of the project and Sunol Regional Wilderness Area that are outside the control boundary. ~~Close m~~Monitoring of construction ~~activity cells~~ activities will provide information to demonstrate whether the generation of dust, asbestos and metals is being effectively controlled at the source, before it reaches the work area boundary~~limits, providing valuable information regarding the contractor's dust control measures in each cell while monitoring at the perimeter of the work limits would be used to demonstrate compliance with the Asbestos ATCM~~. Perimeter monitoring locations will be selected within or at the control boundary to detect dust, asbestos, and metals for comparison with the trigger levels identified in the Comprehensive Air Monitoring Program. In addition, monitoring will include continuous collection of meteorological data on wind speed and direction in the project area.

The Comprehensive Air Monitoring ~~Plan~~ Program ~~would~~shall specify the location(s) and frequency of perimeter monitoring, and risk-based trigger levels of asbestos and metals (including chromium, nickel, arsenic, copper, and cobalt) that would be protective of off-site receptors (e.g., recreational users of Calaveras Road and/or nearby trails in the Sunol Regional Wilderness area, as well as visitors, residents, and park employees~~workers stationed in the Sunol Wilderness~~)~~,~~. The Comprehensive Air Monitoring Program shall also specify ~~and~~ corrective actions to be taken should the~~ aceptable~~ trigger level of asbestos or metals be exceeded at perimeter monitoring locations. ~~Should~~If trigger levels ~~be~~are exceeded at a perimeter monitoring location, the SFPUC ~~would~~shall notify Alameda County, East Bay Regional Park District, and other applicable entities~~,~~; ~~to coordinate activities that may include closure of the affected road or trail,~~ investigate the cause of the exceedance~~,~~; and implement corrective actions such as implementation of enhanced dust suppression techniques. Should corrective action fail to bring asbestos or metals concentrations to within ~~acceptable~~ risk-based trigger limits, the Comprehensive Air Monitoring ~~Plan~~ Program ~~would~~ will require the contractor to modify or temporarily halt construction activities in areas generating excessive dust until dust generation could be maintained within ~~acceptable~~ trigger levels. ~~Affected roads and trails would not be reopened until monitoring indicated that asbestos and metals concentrations are within acceptable limits.~~

Should trigger levels be exceeded in the tunnel emissions, the SFPUC ~~would~~ shall investigate the cause of the exceedance, and implement corrective actions such as implementation of enhanced dust suppression techniques or additional emission controls. Should corrective action fail to bring asbestos concentrations to within ~~acceptable~~ risk-based trigger limits, the Comprehensive Air Monitoring ~~Plan~~ Program ~~would~~ shall require the contractor to reduce or stop tunneling in areas generating excessive dust until dust generation could be maintained within ~~acceptable levels~~ trigger limits.

~~Both t~~The Asbestos Dust Mitigation Plan ~~and Comprehesive Air Monitoring Plan would~~ shall be subject to review and approval by the BAAQMD prior to the start of construction. The Comprehensive Air Monitoring Program shall be reviewed by the BAAQMD prior to the start of construction.

[3] The "work area boundary" is defined as the limits of the active work areas of the project, within which soil and rock will be disturbed during construction; construction activity area monitoring locations will be within the work area boundary. The "control boundary" will be identified under the Comprehensive Air Monitoring Program and will encompass the work area boundaries and lie entirely within the CCSF-owned property boundary; perimeter monitoring locations will be located along or within the control boundary.

Mitigation Measure 5.9.5 on EIR page 5-32 is revised as follows:

Hazardous Materials in Structures to be Demolished

Any electrical equipment containing polychlorinated biphenyls (PCBs), fluorescent lights containing mercury vapors or fluorescent light ballasts containing PCBs or Bis (2-ethylhexyl) phthalate (DEHP) in any of the structures to be demolished shall be removed and legally disposed of ~~properly~~ at a permitted off-site facility.

Section 5.12, Transportation

Mitigation Measure 5.12.4a, on EIR pages 5-37 – 5-38, is clarified by adding the following Traffic Control Plan element:

- SFPUC and its contactors shall coordinate individual traffic control plans for SFPUC projects in the Sunol Valley.

In Mitigation Measures 5.12.4a, the first bullet on EIR page 5-38 (the sixth bulleted item of the measure) is revised and expanded as follows:

- Public roadway rights-of-way shall be repaired or restored to their preconstruction conditions upon completion of construction. The SFPUC shall inspect and document the condition of Calaveras Road prior to and after completion of the project and, if roadway damage is detected, enter into an agreement with Alameda and Santa Clara Counties or the City of Milpitas, if applicable, for implementing a post-construction roadway repair/rehabilitation program. At a minimum, roads damaged by the project shall be repaired to a structural condition equal to that which existed prior to the project construction activities at no expense to Alameda or Santa Clara Counties, or the City of Milpitas. Maintenance of adequate driving and bicycling conditions of Calaveras Road during the construction period shall also be addressed.

The following item is added to Mitigation Measure 5.12.4a, Traffic Control Plan, on EIR page 5-38 after the last bullet for the measure:

- If applicable, the construction contractor shall obtain a truck haul permit related to construction vehicle travel through the City of Milpitas.

Mitigation Measures 5.12.4a on EIR page 5-38 is clarified by adding the following Traffic Control Plan element as a new bullet after the last bullet in that measure:

- The closed portion of Calaveras Road between Geary Road and Felter Road shall be swept clean before 6:00 am Saturday morning, and re-opened to traffic on Saturday and Sunday.

Chapter 6, Other Topics Required by CEQA

Section 6.2, Cumulative Effects by Environmental Topic

In Section 6.2.3.4, Hydrology, the second paragraph on page 6-33 is modified as follows:

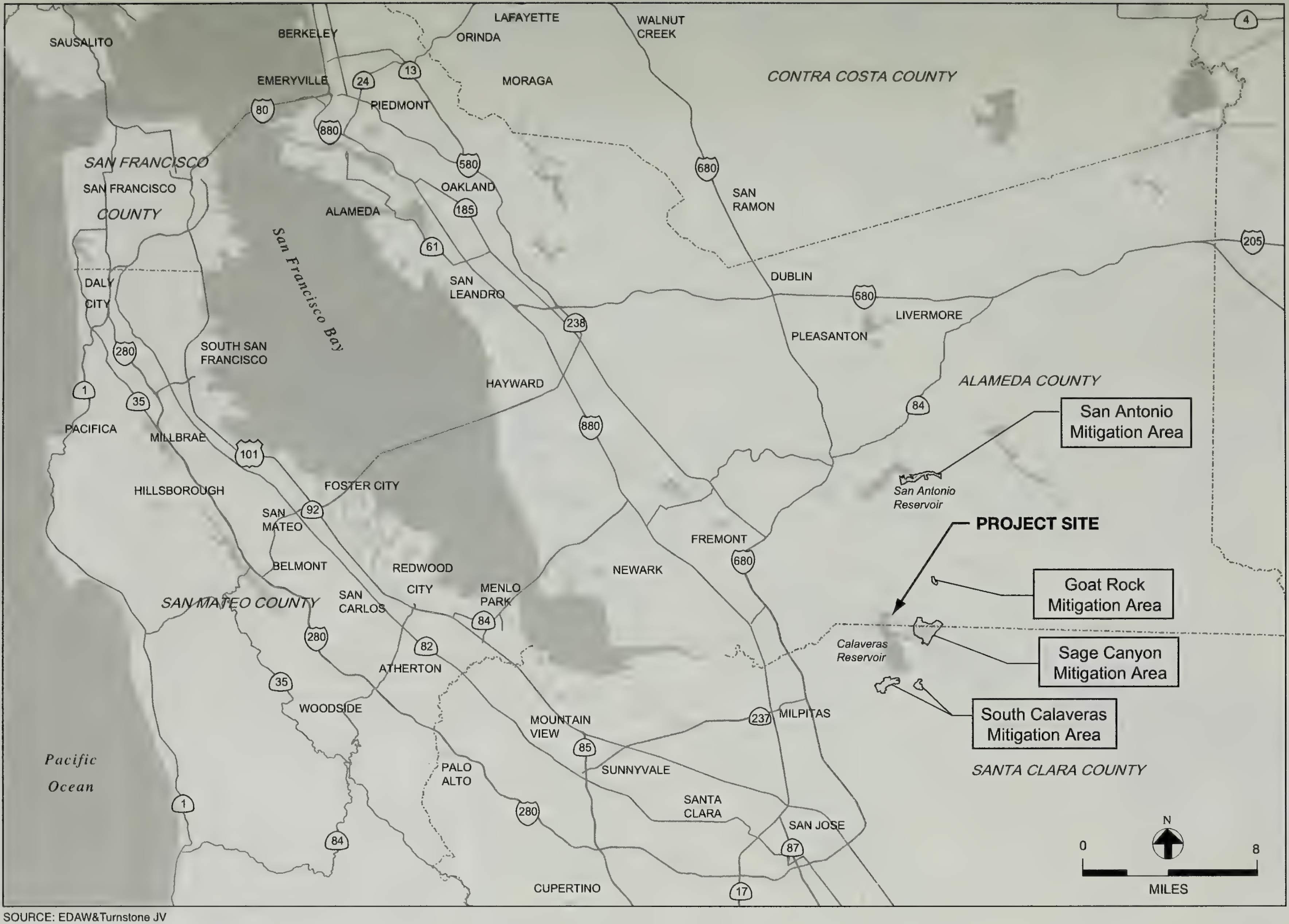
> Operation of the UACFGP, Cumulative Project No. 8 in Table 6.1, would affect flow in Alameda Creek downstream of the UACFGP. The UACFGP would withdraw up to 20 cfs of flow in Alameda Creek that would be bypassed or released upstream from the ACDD and~~/or~~ Calaveras Dam to meet the MOU flow requirements. The impact on Alameda Creek would be moderated downstream of the confluence ~~once the creek joins~~ with Arroyo de la Laguna ~~(ADLL)~~ by the addition~~al~~ of flow from that stream ~~in the ADLL~~. The segment of Alameda Creek that would experience the most substantial proportional reduction in flow as a result of the UACFGP ~~project~~ would be from the confluence with San Antonio Creek to the confluence with the ~~ADLL~~ Arroyo de la Laguna, approximately 1.7 miles of creek.

VOLUME 3

Appendix C, Vegetation and Wildlife Survey Reports

C.2 Memorandum: Evaluation of Proposed Mitigation Areas for the Calaveras Dam Replacement Project

Figures 1 and 2 and the photo appendix, below, are added to Appendix C.2 to show updated boundaries and photos of the CDRP mitigation areas.

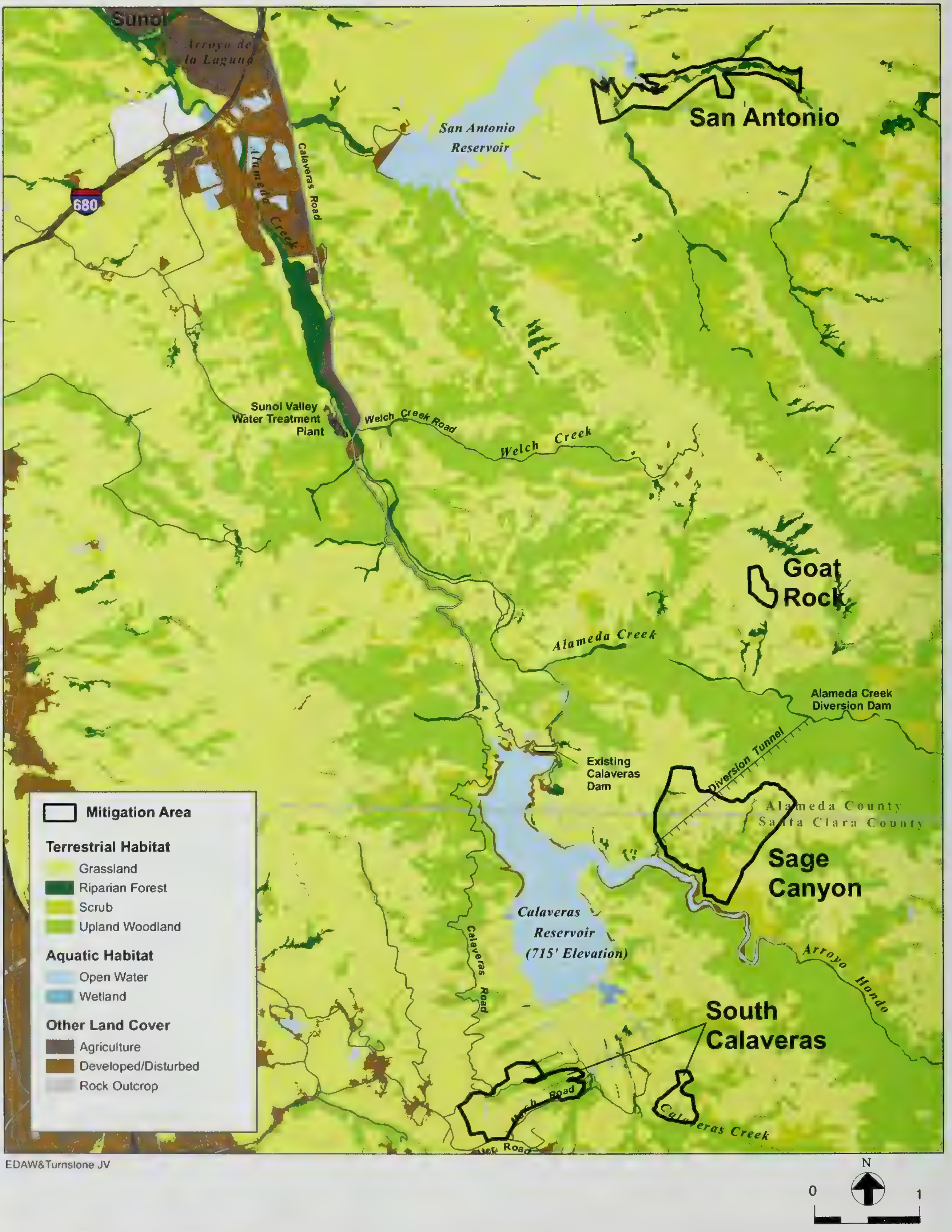

SAUSALITO
BERKELEY
LAFAYETTE
WALNUT CREEK
ORINDA
EMERYVILLE
MORAGA
PIEDMONT
CONTRA COSTA COUNTY
SAN FRANCISCO
SAN FRANCISCO
COUNTY
OAKLAND
ALAMEDA
SAN RAMON
San Francisco Bay
SAN LEANDRO
DUBLIN
DALY CITY
LIVERMORE
PLEASANTON
SOUTH SAN FRANCISCO
HAYWARD
ALAMEDA COUNTY
PACIFICA
MILLBRAE
San Antonio Mitigation Area
HILLSBOROUGH
FOSTER CITY
San Antonio Reservoir
SAN MATEO
PROJECT SITE
FREMONT
BELMONT
REDWOOD CITY
NEWARK
Goat Rock Mitigation Area
SAN MATEO COUNTY
SAN CARLOS
MENLO PARK
Calaveras Reservoir
Sage Canyon Mitigation Area
ATHERTON
WOODSIDE
MOUNTAIN VIEW
MILPITAS
South Calaveras Mitigation Area
SUNNYVALE
SANTA CLARA COUNTY
Pacific Ocean
PALO ALTO
SANTA CLARA
SAN JOSE
CUPERTINO
N
0
8
MILES
4
24
13
80
880
580
680
185
61
205
238
580
280
1
35
84
880
101
92
680
84
82
280
35
237
85
280
1
84
87
17

SOURCE: EDAW&Turnstone JV

CALAVERAS DAM REPLACEMENT PROJECT

2005.0161E

FIGURE 1: CALAVERAS DAM REPLACEMENT PROJECT AND MITIGATION AREAS LOCATOR MAP (UPDATED)


Sunol
Arroyo de la Laguna
680
Alameda Creek
Calaveras Road
San Antonio Reservoir
San Antonio
Sunol Valley Water Treatment Plant
Welch Creek Road
Welch Creek
Goat Rock
Alameda Creek
Alameda Creek Diversion Dam
Diversion Tunnel
Existing Calaveras Dam
Alameda County
Santa Clara County
Sage Canyon
Calaveras Reservoir (715' Elevation)
Calaveras Road
Arroyo Hondo
South Calaveras
Marsh Road
Calaveras Creek
Felter Road
Mitigation Area
Terrestrial Habitat
Grassland
Riparian Forest
Scrub
Upland Woodland
Aquatic Habitat
Open Water
Wetland
Other Land Cover
Agriculture
Developed/Disturbed
Rock Outcrop
N
0
1
MILE

EDAW&Turnstone JV

CALAVERAS DAM REPLACEMENT PROJECT

2005.0161E

FIGURE 2: MITIGATION AREAS AND REGIONAL LAND COVER (UPDATED)

ATTACHMENT A

PHOTOGRAPHS OF THE CALAVERAS DAM REPLACEMENT PROJECT MITIGATION AREAS: SOUTH CALAVERAS, SAN ANTONIO, SAGE CANYON, AND GOAT ROCK

Photo 1. South Calaveras Mitigation Area – Goldfish Pond looking south.

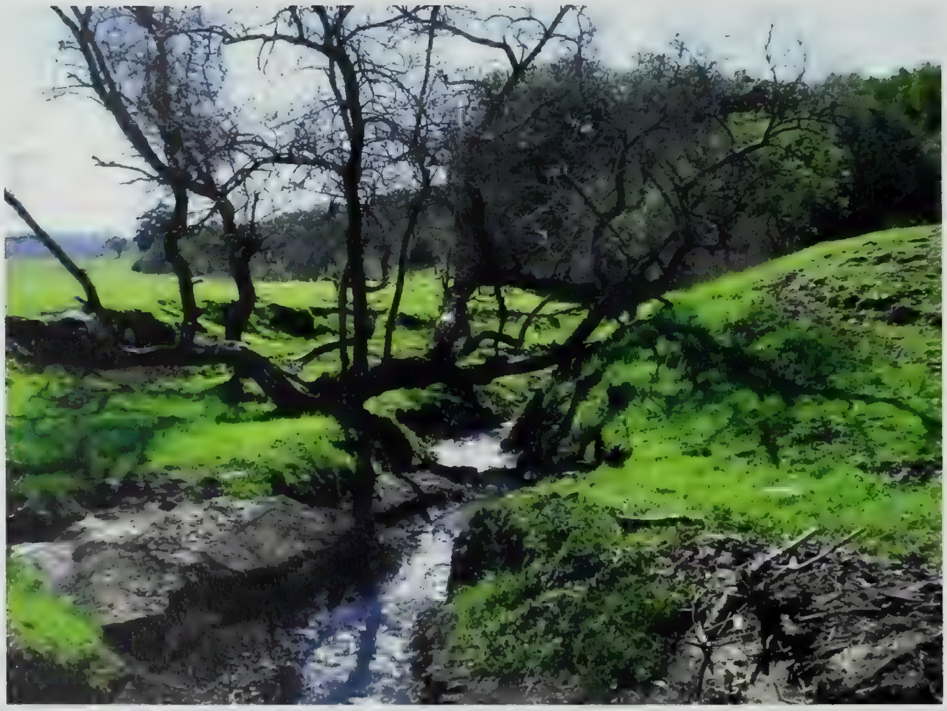


Photo 2. South Calaveras Mitigation Area – ephemeral drainage perpendicular to main ridges draining to reservoir.

Photo 3. South Calaveras Mitigation Area – view of Calaveras Reservoir to the north with patchy scrub habitat in foreground and drainage in background.

Photo 4. South Calaveras Mitigation Area – large scrub patch in background on central portion of site.

Photo 5. San Antonio Mitigation Area looking northeast at San Antonio creek corridor and scrub on north bank in background.

Photo 6. San Antonio Mitigation Area looking north at confluence of Indian Creek on western portion of site.

Photo 7. San Antonio Mitigation Area – off channel pool on eastern portion of site.

Photo 8. San Antonio Mitigation Area – tree frog egg mass in off channel pool.

Photo 9. San Antonio Mitigation Area looking southeast.

Photo 10. San Antonio Mitigation Area – steep north bank with scrub vegetation.

Photo 11. Sage Canyon Mitigation Area – looking east at large stock pond and rock outcrop.

Photo 12. Sage Canyon Mitigation Area – looking south down steep drainages on site.

Photo 13. Sage Canyon Mitigation Area – looking south at characteristic rock outcrops and scrub habitat on site.

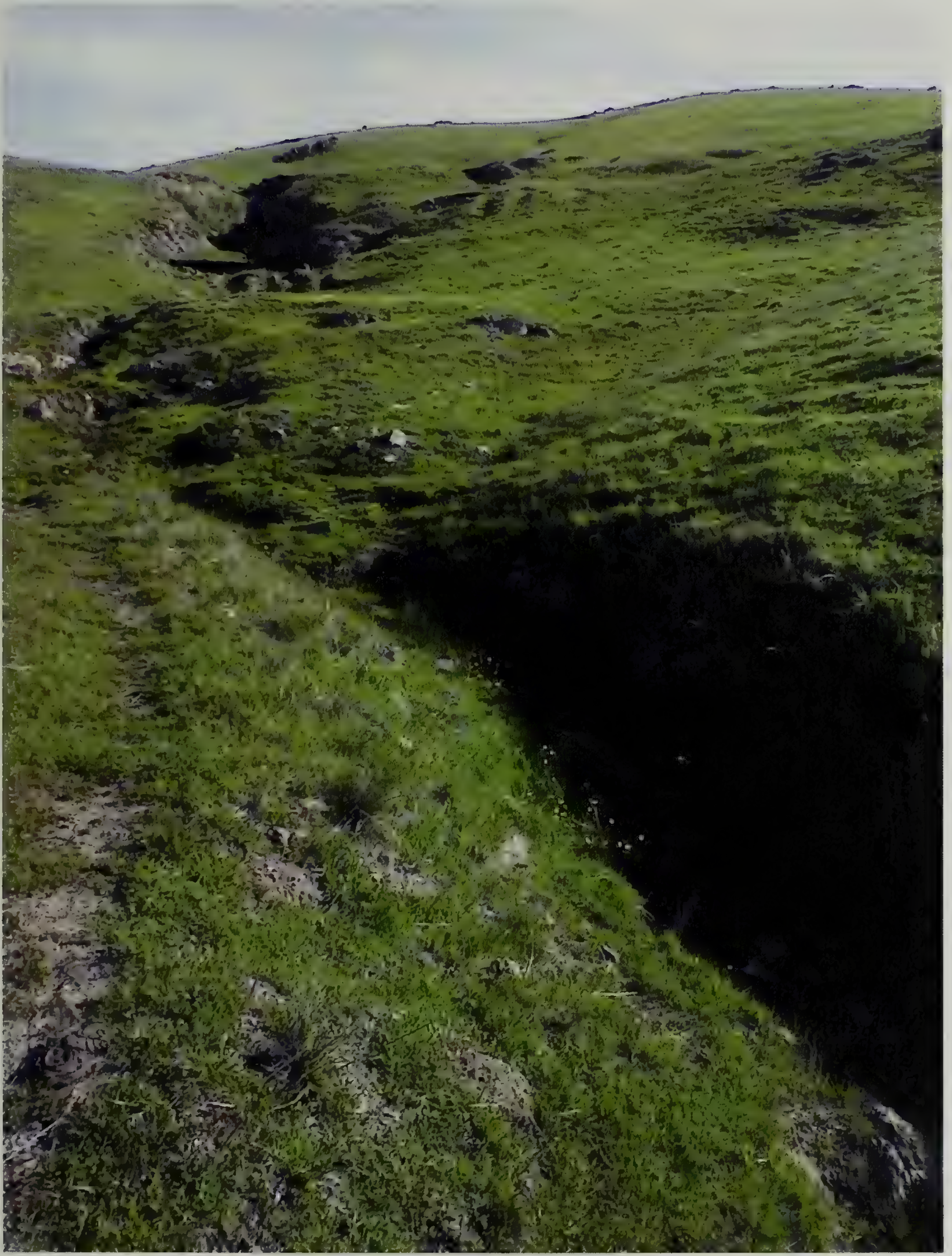


Photo 14. Goat Rock Mitigation Area – serpentine grassland.

Photo 15. Goat Rock Mitigation Area – many rock outcrops.

12.2 STAFF-INITIATED TEXT CHANGES

VOLUME 1

List of Acronyms and Abbreviations

The following acronym is deleted from EIR page xiii:

> ~~HRP Habitat Reserve Program~~

Chapter 1, Executive Summary

The first and second sentences of the third paragraph on EIR page 1-2 are revised as follows:

> Under Chapter 31 of the San Francisco Administrative Code, the San Francisco Planning Department's Major Environmental Analysis Division (MEA) is responsible for implementing environmental review for all City and County of San Francisco projects. This ~~Draft~~ EIR has been prepared by MEA pursuant to the requirements of the California Environmental Quality Act (CEQA) in California Public Resources Code Sections 21000 *et seq.*, and the State CEQA Guidelines in California Code of Regulations Title 14, Sections 15000 *et seq.*

On EIR page 1-3, the second and third sentences of the first full paragraph are revised as follows:

> The wholesale customers are largely represented by the Bay Area Water Supply and Conservation Agency (BAWSCA), which consists of ~~27~~ 26 total customers. Some of these wholesale customers have other sources of water in addition to what they receive from the SFPUC regional water system, while others rely completely on the SFPUC for supply.

On EIR page 1-4, text is added after the tenth sentence in the first full paragraph as follows:

> Except for impacts to the Alameda Creek watershed related to this project that are reevaluated in this document, as explained here, WSIP-related impacts to which this project contributes have been examined at a sufficient level of detail in the PEIR, and no new, relevant information is available to augment that analysis.

The third sentence of the last paragraph on EIR page 1-6 is revised as follows:

> In the Alameda Creek and Peninsula watersheds, the WSIP, which includes restoring the historical storage capacities of Calaveras and ~~Lower~~ Crystal Springs Reservoirs, could affect reservoir levels, downstream flows, fisheries, and terrestrial biological resources.

The second bulleted item under "Potentially Significant but Mitigable WSIP Water Supply Impacts" on EIR page 1-7 is revised as follows:

- Terrestrial Biological Resources: Tuolumne River (below La Grange Dam - only when average annual deliveries exceed 265 mgd; and impacts on alluvial features that support meadow and riparian habitat from O'Shaughnessy Dam to Don Pedro Reservoir); Calaveras Reservoir; Alameda Creek; Calaveras Creek; ~~Upper and Lower~~ Crystal Springs Reservoir

The first bulleted item under "Potentially Significant and Avoidable WSIP Water Supply Impacts" on EIR page 1-7 is revised as follows:

- Fisheries: ~~Upper and Lower~~ Crystal Springs Reservoir[2]

A footnote is added to the first bulleted item under "Potentially Significant and Avoidable WSIP Water Supply Impacts" on EIR page 1-7 as follows:

> [2] The PEIR identified a potentially significant and unavoidable water supply impact on fisheries in Crystal Springs Reservoir related to inundation of spawning habitat upstream of the reservoir based on the best information available at that time. Subsequent to certification of the PEIR, a project-level EIR was completed on the Lower Crystal Springs Dam Improvements Project and certified on October 7, 2010 (MEA Case No. 2006.0536E, State Clearinghouse No. 2007012002). Based on more detailed site-specific surveys and data, the project-level EIR concluded that this impact on fishery resources would be less than significant. Project-level conclusions supersede any contrary impact conclusions in the PEIR.

On EIR page 1-9, the third sentence of the first full paragraph is revised as follows:

> The 72-inch-diameter cone valve can release up to ~~870~~ 1,000 cubic feet per second (cfs), depending on the reservoir level, to provide rapid lowering of the reservoir.

New text is added after the bulleted list under heading "1.4, Project Description," on EIR page 1-13 as follows:

> Following publication of the Draft EIR in October 2009, the SFPUC developed a variation on the proposed project referred to as the CDRP Variant (or "Variant"). The CDRP Variant would be substantially the same as the Draft EIR project with the addition of fishery enhancements and project refinements to various facility and construction components of the Draft EIR project and the associated modification in operations. The CDRP Variant is the SFPUC's preferred project. (See Chapter 9 of the EIR.)
>
> The main elements of the CDRP Variant in addition to those described above for the proposed project are as follows:
>
> - Construct a fish screen at the ACDD, a fish ladder skirting the ACDD, and fish screens at two of the Calaveras Dam adits;
> - Implement resource-agency approved instream flow schedules for Alameda Creek below the ACDD and for Calaveras Creek below Calaveras Dam;
> - Upgrade an existing electrical distribution line; and
> - Implement an adaptive management implementation plan for Central California Coast steelhead.

New text is added at the end of the second paragraph on EIR page 1-17 as follows:

> Under the Variant, the intake tower would be about 25 feet taller, and fish screens would be installed on the lower two adits.

New text is added at the end of the first paragraph on EIR page 1-18 as follows:

> Under the Variant, the electrical distribution line between Calaveras Dam and Milpitas would be upgraded to provide power necessary for construction.

New text is added at the end of the second paragraph on EIR page 1-18 as follows:

> Under the Variant, additional instrumentation, consisting of an accelerograph would be installed within Staging Area 7.

New text is added at the end of the third paragraph on EIR page 1-18 as follows:

> Under the Variant, a fish screen on the diversion tunnel and a fish ladder skirting the ACDD would be constructed in conjunction with the ACDD bypass facility.

On EIR page 1-21, the third paragraph is revised as follows:

> Access and Roads. Calaveras Road north of the dam, i.e., between Interstate 680 and the dam access road, would be used as the major hauling route for imported materials for dam construction. For traffic safety reasons, the SFPUC would request permission from Alameda County to close the section of Calaveras Road between a point immediately south of the intersection with Geary Road (south of the SVWTP) and a point near the Santa Clara County line (south of the dam access road) to the public, Monday through Friday, except for emergency vehicles, for hauling of the imported materials for the dam during two periods. This segment of Calaveras Road would remain open on weekends and all major holidays. Access to the northern segment of Calaveras Road would also be available at all times from the north via I-680. The road would be closed for approximately 2 months in summer 2011, then reopened. The second closure period would last for approximately 18 months beginning in winter 2012. In addition, the SFPUC would request permission from Santa Clara County to close the portion of the road between the Alameda County line and Felter Road (near the south end of the reservoir) during the same two periods; the purpose of this additional measure would be to prevent private vehicles that may enter Calaveras Road from the south from needing to turn around at the dead end at the Alameda County line. ~~The SFPUC may also need to request permission to close these sections of Calaveras Road in both Alameda and Santa Clara Counties at other times, possibly including weekend days, when air quality monitoring indicates unacceptable levels of dust.~~

New text is added after the third full paragraph on EIR page 1-23 as follows:

> Under the Variant, construction of the fish screen would occur immediately adjacent to the existing trash rack and a power system to operate the screen-cleaning mechanism would be located near the existing utility shed and parking area adjacent to the ACDD; construction of the screen would take about 3 months. The 650-foot long fish ladder would be constructed on the north bank of Alameda Creek, with the upstream end of the ladder about 400 feet upstream of the crest of the ACDD and the downstream end of the ladder about 150 feet downstream of the crest of the ACDD; construction of the fish ladder would take about 6 months. All work in the streambed would be conducted during the dry season.

The first sentence of the fourth full paragraph on EIR page 1-23 is revised as follows:

> The estimated duration of construction would be approximately 4 years for the Draft EIR project or the CDRP Variant.

On EIR page 1-23, the first sentence in the fifth paragraph is revised as follows:

> During construction of the replacement dam, the reservoir would continue to operate using the natural inflow whenever possible and releasing water as necessary to the Sunol Valley Water Treatment Plant (SVWTP) or Calaveras Creek to maintain the restricted reservoir elevation.

New text is added at the end of the paragraph starting on EIR page 1-23 and continuing on EIR page 1-24 as follows:

> In addition, if feasible, depending on the construction phase, the SFPUC would make releases from Calaveras Reservoir as required by regulatory agencies if steelhead are present in Alameda Creek during the construction period.

New text is added after the second full paragraph on EIR page 1-24 as follows:

> Under the Variant, reservoir operations would include implementation of instream flow schedules for Alameda Creek below the ACDD and for Calaveras Creek below the Calaveras Dam. Under the instream flow schedules, there would be two measuring points for compliance: one located in Alameda Creek immediately below the ACDD at a new stream gage and one on Calaveras Creek. The flow schedule would require the SFPUC to close the gates to the Alameda Creek Diversion Tunnel between April 1 and November 30 of each year to allow the unimpaired flow naturally present in Alameda Creek to continue downstream past the ACDD, either through the bypass tunnel, the fish ladder, and/or over the dam crest. For the remaining months of the year, between December 1 and March 31, the SFPUC would open the gates to the diversion tunnel, but when water is present in Alameda Creek above the diversion dam, the SFPUC would ensure that a minimum flow of 30 cfs would continue down Alameda Creek, either through the bypass tunnel, the fish ladder, and/or over the dam crest. In Calaveras Creek, there would be year-round releases ranging from 7 to 12 cfs, depending on the time of year and the water year type. As agreed upon with the regulatory agencies, these instream flow schedules would supersede the fishery releases described in Section 1.4.4.2, below, including the requirements of the 1997 MOU and the flows for steelhead proposed for the Draft EIR project.

New text is added at the end of the third paragraph on EIR page 1-24 as follows:

> Under the Variant, operations would also include inspection and maintenance of the fish screen at the ACDD (including sluicing of sediments every 4 to 8 weeks) and periodic inspection and maintenance of the fish ladder.

The fourth paragraph starting on EIR page 1-25 and continuing on EIR page 1-26 is revised as follows:

> This Draft EIR ~~will undergo~~ was subject to a ~~45-~~77-day public review period, including one public hearing in the East Bay on November 10, 2009, ~~and~~ one in San Francisco on November 12, 2009, and one in Sunol on December 14, 2009 to obtain comments from

> the public and agencies on the Draft EIR. The public review period ~~is~~ was initially from October 6, 2009 to November 20, 2009 but was extended until December 21, 2009. Following the public review period, responses to written and oral comments received from the public and agencies ~~will be~~ have been prepared, and revisions to the Draft EIR text ~~will be~~ identified, ~~if~~ as appropriate, based on these responses. The Comments and Responses document (included in the Final EIR) will be distributed to all commenters and to individuals providing a written request for the document. The San Francisco Planning Commission will consider certification of the Final EIR, comprised of the Draft EIR, revisions to the Draft EIR text, and the Comments and Responses document. Certification by the Planning Commission can be appealed to the San Francisco Board of Supervisors. Once certified, the EIR will serve as one source of information to assist the SFPUC in determining whether to approve or modify the proposed project or Variant.

The last sentence of the second full paragraph on EIR page 1-27 is revised as follows:

> Some impacts would be long-term effects (e.g., visual resources) as is described more fully in the impact analysis text in Chapter 4 and in Chapter 9 for the Variant.

New text is added after the sixth full paragraph on EIR page 1-29 as follows:

> Under the Variant, the SFPUC would implement agency-approved instream flow schedules for Alameda Creek below the ACDD and for Calaveras Creek below the Calaveras Dam, which would supersede the requirements of the 1997 MOU and the flows for steelhead proposed for the Draft EIR project.

New text is added at the end of the second full paragraph on EIR page 1-30 as follows:

> The Variant would result in beneficial effects on native fish in Alameda and Calaveras Creeks.

The last sentence of the fifth full paragraph starting on EIR page 1-30 and continuing on EIR page 1-31 is revised as follows:

> The EIR also concludes that, while the impacts of emissions of ozone precursors ~~and greenhouse gases~~ during construction could be mitigated to less-than-significant levels under existing BAAQMD thresholds, these impacts would be significant and unavoidable under ~~newly proposed~~ the 2010 adopted BAAQMD thresholds for construction-related emissions.

The first full paragraph on EIR page 1-31 is revised as follows:

> Table S.2 presents a summary of the proposed project's impacts and mitigation measures for the Draft EIR project, and Table S.3 presents a comparison of the impacts and mitigation measures for the Draft EIR project and the Variant. Table S.4 lists the full text of the mitigation measures applicable to the Variant. The topics in the tables follow the order and numbering scheme of the sections in Chapter 4; ~~and~~ Chapter 5, Mitigation Measures Proposed to Minimize Potentially Significant Adverse Impacts of the Project; and Chapter 9, Project Variant. Each mitigation measure is numbered to correspond to the impact it addresses. The levels of significance for the impacts are designated by the following abbreviations:

The last sentence of the third full paragraph on EIR page 1-31 is revised as follows:

> However, the EIR identifies mitigation measures that could reduce the project's contribution to cumulative impacts such that the project, as mitigated, would not result in a considerable contribution to significant cumulative impacts, except in the area of air quality based on ~~proposed~~ 2010 adopted BAAQMD thresholds of significance.

New text is added to the end of the third paragraph starting on EIR page 1-31 and continuing on EIR page 1-32 as follows:

> Under the Variant, the SFPUC would implement the proposed instream flow schedules upon completion of CDRP construction.

The first sentence of the second full paragraph on EIR page 1-32 is revised as follows:

> In addition, because the proposed project is part of the WSIP, the WSIP PEIR found that it would also contribute to the following significant and unavoidable impacts: effects in the Peninsula watershed on fishery resources ~~in~~ upstream of Crystal Springs Reservoir in San Mateo County; and effects on stream flow in Alameda Creek between the diversion dam and the confluence with Calaveras Creek.

New text is added after the second sentence in the second full paragraph on EIR page 1-32 as follows:

> Subsequent project-level analysis for the Lower Crystal Springs Dam Improvements Project EIR (certified on October 7, 2010, MEA Case No. 2006.0536E, State Clearinghouse No. 2007012002) determined that the impact on fishery resources upstream of Crystal Springs Reservoir in San Mateo County is less than significant.

The second sentence in the fourth full paragraph on EIR page 1-33 is revised as follows:

> Cumulative impacts of the proposed project in combination with other projects proposed by the SFPUC and others in the Sunol Valley are discussed in Section 6.2, Cumulative Impacts, in Chapter 6, and cumulative impacts of the Variant are discussed in Section 9.5.2, Cumulative Effects of the Variant, in Chapter 9.

The fifth full paragraph on EIR page 1-33 is revised as follows:

> The significant impacts described in Chapter 4, Environmental Setting and Impacts, and in Chapter 9, Project Variant, could be mitigated to less-than-significant levels with implementation of mitigation measures identified in this ~~Draft~~ EIR, with the exception of impacts on visual resources and construction-related transportation, air quality, and nighttime noise impacts, discussed below.

The last sentence in the sixth paragraph starting on EIR page 1-33 and continuing on EIR page 1-34 is revised as follows:

> Therefore, this visual impact is considered significant and unavoidable, as described in Section 6.3, Significant Effects That Cannot Be Avoided if the Proposed Project Is Implemented, and in Section 9.5.2, Cumulative Effects of the Variant.

The last sentence in the first full paragraph on EIR page 1-34 is revised as follows:

> However, back-up beepers could still exceed ordinance limits during the nighttime hours. Therefore this impact is identified as significant and unavoidable in Sections 6.3 and 9.5.2.

The third paragraph starting on EIR page 1-34 and continuing on EIR page 1-35 is revised as follows:

> Construction activities would result in emissions of reactive organic gasses (ROG) and nitrogen oxides (NO_X) (both ozone precursors)~~, and fine particulate matter (PM_{10} and $PM_{2.5}$),~~ at levels that would not exceed existing BAAQMD thresholds but would exceed ~~proposed~~ the 2010 adopted BAAQMD thresholds. Mitigation measures identified in Section 5.14, Air Quality Mitigation Measures, would not reduce these significant impacts to less-than-significant levels based on the ~~proposed~~ adopted thresholds. Therefore, construction-related emissions of ozone precursors~~, PM_{10}, and $PM_{2.5}$~~ are considered to result in significant unavoidable impacts under BAAQMD's 2010 adopted thresholds of significance. Project construction activities would also likely exceed the draft Option 2 threshold of significance proposed by the BAAQMD for greenhouse gas (GHG) emissions. The project's GHG emissions would not contribute ~~considerably~~ to significant cumulative GHG emissions. ~~The project's air quality impacts would be significant and unavoidable based on proposed BAAQMD thresholds.~~

The first sentence of the second full paragraph on EIR page 1-35 is revised as follows:

> Comments from public agencies and the concerned public included many issues that are addressed in this ~~Draft~~ EIR.

The fifth bullet under Mitigation Measure 5.4.1a, Pre-Construction Measures, in Table S.2: Summary of Impacts and Mitigation Measures on EIR pages 1-39 – 1-40, is revised as follows:

4.4.1	Effect of CDRP on wetlands and other aquatic habitats.	Construction: **S** Filling: **S** Operation: **LS**	• **California Tiger Salamander Pre-construction Survey.** A preconstruction survey will be conducted at each work site where there would be ground-disturbing activities to identify suitable California tiger salamander burrow aestivation areas. Aestivation habitat will be defined as the presence of two or more small mammal burrows greater than 1 inch in diameter within a 10-foot-diameter area and within 10 feet of proposed construction sites (i.e., the presence of a single isolated gopher hole would not be considered habitat). As feasible within the context of the work area, aestivation areas will be temporarily fenced and avoided. A California tiger salamander salvage and relocation plan will be prepared in coordination with USFWS and CDFG. A qualified biologist will carry out the salvage and relocation operations at construction sites where upland habitat has been identified. Surveys and trapping of California tiger salamanders will occur in the rainy season prior to construction or as directed by resource agency permits. The effort shall be	**LSM** **LSM** **LS**

			appropriately timed with respect to salamander activity for the year and proposed construction activities. Drift fences and pitfall traps within or on the perimeter of construction sites will be used to capture and relocate animals to suitable areas nearby that will not be affected by construction. USFWS trapping protocols will be followed. Exclusion fencing (described in Mitigation Measure 5.4.2, Construction Measures) will be regularly maintained and monitored until the start of and throughout construction.	

Mitigation Measure 5.4.3 in Table S.2: Summary of Impacts and Mitigation Measures starting on EIR page 1-48 under Impact 4.4.3: Effect of CDRP on California tiger salamander, is revised as follows:

4.4.3	Effect of CDRP on California tiger salamander.	Construction: **S** Filling: **S** Operation: **LS**	**5.4.3 Compensation Measures** The SFPUC shall compensate for unavoidable impacts on special-status species and sensitive habitats in accordance with a detailed compensation plan or plans. The compensation plan(s) shall be prepared by a qualified restoration ecologist and shall be consistent with all required permits. The final compensation plan(s) shall fully compensate for direct and indirect impacts on special-status species and for the temporal, long-term, and permanent losses of habitat areas, functions, and services and shall include: a description of the resource types and amounts that will be provided; the methods of compensation (i.e., restoration, rehabilitation, re-establishment, establishment, enhancement, and/or preservation); and the manner in which the resource functions and services of the compensation project will address the related project impacts. The final compensation acreages will be determined in consultation with the permitting agencies, with further details specified in the compensation plan(s). The final compensation plan(s) shall ~~provide, at minimum~~ include the following sections: **5.4.3a Compensation Goals and Objectives** Timeframes provided for the following goals and objectives are the goals for meeting success criteria, not for initiating compensation actions. Replanting and grading would begin as soon as practicable, but no later than one year, following completion of construction. • **Wetlands and Other Waters.** Fully compensate for impacts on approximately 4.61 acres of wetlands and open water, and 4,682 linear feet of stream habitat by ~~restoring~~ establishing and enhancing wetlands, and enhancing streams and open water ~~establishing wetland~~ habitats at the proposed mitigation areas ~~South Calaveras and San Antonio Mitigation Areas~~ within 5 to 10 years of completion of construction.	**LSM** **LSM** **LS**

			• **Riparian Habitat.** Fully compensate for impacts on approximately 7.9~~-~~acres of riparian habitat by enhancing, ~~restoring and~~ establishing, and rehabilitating riparian habitat at the proposed mitigation areas ~~South Calaveras and San Antonio Mitigation Areas~~ within 10 years of completion of construction. • **Oak Woodlands and Savannah.** Fully compensate for impacts on approximately 24.0 acres of oak woodland and savannah habitat by ~~restoring~~ enhancing and establishing oak woodland and savannah habitat at the proposed mitigation areas ~~San Antonio Mitigation Area~~ within 10 years of completion of construction. Impacts on oak woodlands and savannah may also be compensated for in whole or in part through a contribution to the Oak Woodlands Conservation Fund as established under subdivision (a) of Section 1363 of the Fish and Game Code. • **California Red-legged Frog Habitat.** Fully compensate for impacts on approximately 0.11 acre and 10,366 linear feet of California red-legged frog aquatic breeding habitat, and fully compensate for any loss of California red-legged frog at the Alameda Creek Diversion Dam (ACDD) and breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek that may result from a potentially increased bullfrog population by ~~improving~~ enhancing, establishing, and/or preserving aquatic breeding habitat through predator control and vegetation management, and preserving aquatic breeding habitat in impaired water bodies in the proposed mitigation areas ~~South Calaveras Mitigation Area (SCMA)~~ within 5 years of completion of construction, and by improving breeding habitat conditions in Alameda Creek from the ~~Alameda Creek Diversion Dam (~~ACDD~~)~~ to the Calaveras Creek confluence beginning with the advent of bypass flows; fully compensate for permanent impacts on approximately 2.33 acres and 4,387 linear feet of California red-legged frog aquatic non-breeding and 656 acres of upland habitat within 5 years of completion of construction by ~~restoring,~~ enhancing and/or establishing~~,~~ and protecting aquatic non-breeding ~~intermittent stream~~ habitat and enhancing and/or establishing and preserving upland/dispersal habitat at the proposed mitigation areas~~South Calaveras and San Antonio Mitigation Areas~~ within 10 years of completion of construction. • **California Tiger Salamander Habitat.** Fully compensate for impacts on approximately 0.11 acres of California tiger salamander aquatic habitat by ~~improving~~ enhancing, establishing, and preserving aquatic habitat through predator control and vegetation management in impaired water bodies in the ~~SCMA~~ proposed mitigation areas within 5 years of completion of	

			construction; fully compensate for permanent impacts to 971.6 acres of upland habitat ~~within 5 years of completion of construction~~ by enhancing, establishing and/or preserving ~~protecting~~ upland habitat within 5~~10~~ years of completion of construction. • **Alameda Whipsnake Habitat.** Fully compensate for impacts on approximately 33 acres of scrub/shrub habitat and 13.7 acres of rock outcrop habitat for the Alameda whipsnake by enhancing and/or establishing scrub habitat and protecting rock outcrops at the Sage Canyon Mitigation Area within 5 years of completion of construction; fully compensate for permanent impacts on approximately 606.9 acres of woodland and grassland habitat by ~~protecting~~ enhancing and/or establishing grasslands and woodlands adjacent to scrub at the proposed ~~all four~~ mitigation areas within 10 years of completion of construction. • **Callippe Silverspot Butterfly Habitat.** Fully compensate for impacts on approximately 0.57 acres of callippe silverspot butterfly larval habitat by enhancing, establishing and/or protecting grasslands containing the larval host plant (*Viola pedunculata*) at the proposed mitigation areas ~~SCMA and Sage Canyon Mitigation Area~~ within ~~5~~10 years of completion of construction. • **Foothill Yellow-legged Frog Habitat.** Document that project benefits to foothill yellow-legged frog habitat in Alameda Creek from the ACDD to the Calaveras Creek confluence fully compensate for ~~the~~any loss of foothill yellow-legged frog at the ACDD and for the loss of approximately 9,421 linear feet (approximately 1.8 miles) of habitat in Arroyo Hondo, ~~and~~ fully compensate for ~~any~~0.03 acre ~~loss~~ of aquatic habitat at the ACDD, and for any loss of breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek that may result from a potentially increased bullfrog population through monitoring and adaptive management within 5 years of the start of bypass flows at the ACDD. • **Annual Grasslands.** Fully compensate for impacts on approximately 418 acres of annual grassland habitat by ~~establishing~~ enhancing native perennial grasslands and enhancing and protecting non-native annual grasslands at ~~all four~~ the proposed mitigation areas within 5 years of completion of construction. • **Serpentine Grasslands.** Fully compensate for impacts on approximately 13.6 acres of serpentine grassland habitat by enhancing and protecting serpentine grasslands at the Goat Rock Mitigation Area within 5 years of completion of construction.	

			5.4.3b Site Selection The final compensation plan(s) shall include a description of the factors considered during the final mitigation site selection process, including consideration of watershed needs~~, on-site alternatives,~~ and the practicability of accomplishing ecologically self-sustaining habitats at the mitigation sites. All sites selected must be known to support, or be able to support, the required habitat functions and services, or as otherwise determined in consultation with permitting agencies.	

Mitigation Measure 5.7.2 in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-68 after the last bullet is revised as follows:

4.7.2	Impact on water bodies as a result of a hazardous materials release, NOA or metals release, or solid waste discharge during construction.	**S**	See also Water Quality Mitigation Measure 5.7.1 ~~and Hazards and Hazardous Materials Mitigation Measure 5.9.2a~~.	**LSM**

Mitigation Measure 5.9.2b in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-75 is revised as follows:

4.9.2	Release of airborne NOA and naturally occurring metals from excavation, hauling, blasting, tunneling, placement, and on-site disposal of Franciscan complex serpentinite or mélange.	**S**	**5.9.2b Construction Worker Protection** • Signs ~~would~~shall be posted at the entrance to work areas where activities that disturb NOA would occur and along the road to indicate where NOA-containing materials are known to be present or handled.	**LSM**

Impact Statement 4.9.4 in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-76 is revised as follows:

4.9.4	Increased risk of fires ~~during construction~~ in an area of high fire danger.	**LS**	No mitigation necessary.	**LS**

Impact Statement 4.9.6 in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-76 is revised as follows:

4.9.6	Release of fuel and other hazardous materials to the environment, including Calaveras Reservoir~~, during construction~~.	**S**	See Water Quality Mitigation Measure 5.7.1, above.	**LSM**

New text is added after the second paragraph under Mitigation Measure 5.10.2 in Table S.2: Summary of Impacts and Mitigation Measures starting on EIR page 1-79 under Impact 4.10.2: Impact of construction activities on unknown archeological resources, as follows:

4.10.2	Impact of construction activities on unknown archaeological resources.	S	**5.10.2 Archaeological Measure II: Accidental Discovery Measures** SFPUC Construction Measure #9 for cultural resources requires that construction activities be suspended immediately if there is any indication of an archaeological resource. To avoid any potentially significant adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in State CEQA Guidelines Section 15064.5(a)(c), the project sponsor shall distribute the Planning Department's archaeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor firms (including demolition, excavation, grading, foundation, pile driving); and/or to utilities firm involved in soil-disturbing activities within the project site. Prior to any soils-disturbing activities being undertaken, each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel, such as machine operators, field crew, pile drivers, and supervisory personnel. The project sponsor shall provide the ERO with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel have received copies of the "ALERT" sheet. Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the SFPUC shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.	**LSM**

Mitigation Measure 5.10.5, Paleontological Resources, in Table S.2: Summary of Impacts and Mitigation Measures starting on EIR page 1-81 under Impact 4.10.5: Construction impacts on unknown paleontological resources, is replaced as follows:

4.10.5	Construction impacts on ~~unknown~~ paleontological resources.	S	**5.10.5 Paleontological Resources** **Paleontological Resources Training** Prior to the initiation of any site preparation ~~and~~/or start of construction, the SFPUC shall ensure that all construction forepersons and field supervisors receive training overseen by a qualified professional paleontologist or a California Registered Professional Geologist (California RPG) with appropriate paleontological expertise, as defined by the Society of Vertebrate Paleontology's ~~(SVP)~~ Conformable Impact	**LSM**

			Mitigation Guidelines Committee (SVP 1995 Guidelines), ~~and~~ who is experienced in teaching non-specialists, to ensure that ~~they~~ forepersons and field supervisors can recognize fossil materials in the event that any are discovered during construction. Training on paleontological resources shall also be provided to all other construction workers but may include videotape of the initial training and/or the use of written materials rather than in-person training by a paleontologist. Training shall include an explanation of which portions of the project (i.e., excavation for the Left Abutment Core and Shell Foundation Trench; Right Dam Abutment; Stilling Basin cut slope, above an elevation of approximately 780 feet; Spillway Discharge Channel; the top formation of Borrow Area B, above elevation of approximately 780 feet; Borrow Area E/Disposal Site 5; Staging Areas 5, 7, and 8; and Electrical Distribution Line Upgrade) that possess a high sensitivity for potential paleontological resources. **~~Conduct~~ Pre-Construction assessment, resource avoidance and/or salvage, and construction monitoring for paleontological resources ~~Surveys for Significant Paleontological Resources in Areas of Undetermined and High Paleontological Sensitivity~~** Pre-construction assessment, resource avoidance and/or salvage, and construction monitoring for paleontological resources within excavation for the Left Abutment Core and Shell Foundation Trench; Right Dam Abutment; Stilling Basin, above an elevation of approximately 780 feet; Spillway Discharge Channel; the top formation of Borrow Area B, above an elevation of approximately 780 feet; Borrow Area E/Disposal Site 5; Staging Areas 5, 7, and 8; and Electrical Distribution Line Upgrade which would be constructed partially or wholly in geologic units with a high potential for paleontological resources. Prior to construction, the SFPUC ~~will~~ shall implement the following: • A literature review shall be conducted by a California RPG with appropriate paleontological expertise or a qualified professional paleontologist, as defined by the SVP 1995 Guidelines to ensure the geologist/paleontologist is familiar with previous documentation prepared for the project, and the latest data on fossil localities within the formations in the project region. ~~Contract with a California Registered Geologist (California RG) or a qualified professional paleontologist, as defined by the SVP's Conformable Impact Mitigation Guidelines Committee (1995), to conduct a more detailed evaluation of potential paleontological resources in those areas of the project identified as undetermined or highly sensitive for paleontological resources.~~	

			• ~~The evaluation will include a thorough literature-based and~~ A ~~field~~ reconnaissance-level field assessment ~~survey~~ of the ~~potential~~highly sensitive areas where ground disturbance (grading or excavation) activities ~~are planned~~shall be conducted. The field ~~survey~~assessment ~~will~~shall be limited to identifying potentially significant features at the surface. In areas of thick ground cover, this assessment may need to be conducted after vegetation clearing. • The ~~evaluation will~~ results of the field assessment shall be documented in a ~~report~~technical memorandum to be submitted for review and approval by the ERO or designee prior to the start of construction, which shall include recommendations for appropriate and feasible procedures to avoid or minimize damage to any paleontological resources expected to be present. The memorandum shall also make recommendations regarding the need, if any, for paleontological monitoring of ground-disturbing activities. In the event that the memorandum identifies recommendations for monitoring, it shall include information on where, when, and how this monitoring shall be conducted. The ERO or designee shall review and approve the memorandum in consultation with the SFPUC. • If the evaluation and ~~survey~~ field assessment result in the discovery of a paleontological resource exposed at the surface, or confirm the potential for impacts on significant paleontological resources, ~~Mitigation Measures 5.10.5 and 5.10.6 will also be implemented. Mitigation Measure 5.10.3 will be implemented as a safeguard regardless of the identified likelihood of potential impacts~~ then avoidance and/or salvage and monitoring shall also be implemented as described below. **~~Perform Pre-Construction Surface Salvage of Any Significant Paleontological Resources Discovered~~** If a significant paleontological resource is discovered at the ground~~'s~~ surface as a result of the preconstruction ~~surveys conducted per Mitigation Measure 5.10.4~~ assessment and cannot be avoided through exclusion of the area from project disturbance (e.g., through a project change or the installation of exclusion fencing), the SFPUC ~~will~~ shall retain ~~a California RG or~~ a qualified professional paleontologist ~~(as defined in Mitigation Measure 5.10.4)~~ to salvage and treat the resource prior to construction activity in the immediate vicinity of the find. Salvage of the resource ~~would~~ shall include recovering the item and properly documenting, preparing, and curating the find. Recommendations for any treatment that is required will be consistent with SVP 1995 Guidelines and currently accepted scientific practice. If required, t~~T~~reatment of the resource may include preparation and recovery of	

			fossil materials for housing in an appropriate museum or university collection, and may also include preparation of a report for publication describing the find. If no report is required, the SFPUC will ensure that information on the nature, location, and depth of all finds is available to the scientific community through university curation or other appropriate means. No construction activities at the location of the find ~~will~~ shall be allowed until the salvage operation is completed and authorization is provided by the ~~SFPUC~~ ERO or designee. **~~Conduct Paleontological Resources Monitoring during Construction in Areas of Undetermined and High Paleontological Sensitivity, as Required~~** If determined necessary ~~after implementation of Mitigation Measure 5.10.4, SFPUC will retain~~ by the ERO or designee after review of the preconstruction assessment memorandum~~)~~, a qualified professional paleontologist, as defined by the ~~SVP's Conformable Impact Mitigation Guidelines Committee (~~SVP 1995 Guidelines)~~, to~~ shall conduct ~~onsite~~ periodic monitoring ~~for unanticipated discovery of potentially significant paleontological resources~~ during ~~initial~~ ground disturbing activities (e.g., grading and excavation) at sites where ~~in the areas with geological units identified as undetermined or highly sensitive for~~ paleontological resources are confirmed or likely to be present (i.e., within the Briones, Orinda, or Claremont Formations; Temblor Sandstone; Older Alluvium; or colluvium or landslide deposits derived from these units formations).~~, and as field-verified by the qualified paleontologist. After initial ground disturbance activities in the paleontologically sensitive areas, monitoring will cease but a~~ The paleontologist ~~will~~ shall also be retained on-call by the SFPUC and its contractor throughout ~~the project in the event of an unanticipated find during subsequent construction~~ ground-disturbing activities. Paleontological monitoring, if required, will consist of periodically inspecting disturbed, graded, and excavated areas. The monitor will have authority to divert grading or excavation away from exposed areas temporarily in order to examine disturbed areas more closely, and/or recover fossils. The monitor will coordinate with the construction manager so that monitoring is thorough but does not result in unnecessary delays. If potential fossils are discovered during construction, all earthwork or other types of ground-disturbance ~~in the vicinity~~ within 50 feet of the find ~~will~~ shall stop immediately until a qualified professional paleontologist, as defined by the SVP's ~~Conformable Impact Mitigation Guidelines Committee (SVP~~ 1995~~)~~ Guidelines, can assess the nature and importance of the find and recommend appropriate salvage and treatment (as described ~~in Mitigation Measure 5.10.5~~ above). Once the monitor has assessed the find, the monitor may propose modifications to the stop-work	

			radius based on the nature of the find, site geology, and the activities occurring on the site. The monitor's recommendations shall be subject to review and approval by the ERO or designee. The SFPUC ~~will~~ shall be responsible for ensuring that the recommendations of the paleontological monitor regarding treatment and reporting are implemented and reported to the San Francisco Planning Department.	

Mitigation Measures 5.13.1a and 5.13.1b in Table S.2: Summary of Impacts and Mitigation Measures starting on EIR page 1-85 are revised as follows:

4.13 Air Quality				
4.13.1	Impact of short-term increases in emissions of criteria air pollutants and precursors.	**S** Under the ~~newly proposed~~ 2010 BAAQMD construction emissions CEQA thresholds of significance: **S**	The following BAAQMD-recommended mitigation measures may be altered, supplemented, or deleted as determined appropriate by BAAQMD to meet the BAAQMD-enforced performance standard for emissions of air contaminants during BAAQMD's permit review process, since the BAAQMD has final authority over the terms of the Authority to Construct Permit for the proposed project as described in EIR Section 3.7.3, Agency Approvals (EIR page 3-74). **5.13.1a Fugitive dust mitigation measures recommended by the Bay Area Air Quality Management District** The SFPUC shall implement the ~~following~~ BAAQMD-recommended mitigation measures, where required, to reduce emissions of fugitive dust (particulate matter, or PM_{10}) from construction activities, including the following: • Water all exposed surfaces (e.g. active construction areas) at least twice daily. • Cover all haul trucks transporting ~~hauling~~ soil, sand, and other loose materials off-site ~~*or* require all trucks to maintain at least 2 feet of freeboard~~. • Pave applicable road surfaces as soon as possible and lay any building pads as soon as possible after grading unless seeding or soil binders are used~~, apply water three times daily, *or* apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at the construction site~~. • Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. • Sweep track-out from streets at least daily (with water sweepers) if visible soil material is carried onto adjacent public streets. • Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more). • Enclose, cover, water twice daily, *or* apply (nontoxic) soil binders to exposed stockpiles (dirt, sand).	**LSM** **SU**

			• Limit traffic speeds on unpaved roads[5] to 15 miles per hour ~~or as allowed by the BAAQMD based on site conditions~~. • Post publicly visible signage with the telephone number and person to contact at the SFPUC regarding dust complaints. This person, or project liaison, shall respond and take corrective action within 48 hours. The phone number of the BAAQMD shall also be visible to ensure compliance with applicable regulations. • Replant vegetation in disturbed areas as quickly as possible. These fugitive dust mitigation measures work in combination with and will be implemented in addition to dust control measures in Mitigation Measure 5.9.2a – Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program. **5.13.1b BAAQMD-recommended exhaust emissions mitigation measures** The SFPUC shall implement the following BAAQMD-recommended mitigation measures to reduce exhaust emissions of reactive organic gases, nitrogen oxides, and PM~~$_{10}$~~ from construction activities: • Use grid power instead of diesel generators at all construction sites where it is feasible to connect to grid power. • In contract specifications, include California Code of Regulations, Title 13, Sections~~ 2480 and~~ 2485, which limits the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) ~~to 5 minutes at any location~~, with supplemental idling restrictions of two minutes for diesel powered construction equipment per BAAQMD exhaust control measures. Clear signage indicating idling limits shall be provided for construction workers at all access points. This requirement shall also apply to barges in the event that Haul Option 2 is selected.~~ In addition, limit the use of diesel auxiliary power systems and main engines to 5 minutes when within 100 feet of homes while the driver is resting; this would not apply to the SFPUC watershed keeper's residence, which would be vacated.~~ • Minimize idling time to a maximum of 5 minutes for all ~~of all~~ non-construction ~~commuting~~ diesel vehicles and equipment. • Locate staging areas and equipment maintenance activities as far from sensitive receptors as possible. • A plan shall be developed and implemented demonstrating that the off-road equipment (more than 50 horsepower) to be used for construction (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent PM	

			reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. • Develop a schedule of low-emissions tune-ups and perform such tune-ups on all equipment. A log of required tune-ups shall be maintained and a copy of the log submitted to the SFPUC on a monthly basis for review. In addition, all equipment shall be maintained in good working order and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to initial operation at the project site. • All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM. Develop a schedule of low-emissions tune-ups and perform such tune-ups on all equipment. A log of required tune-ups shall be maintained and a copy of the log submitted to the SFPUC on a monthly basis for review. In addition, all equipment shall be maintained in good working order and properly tuned in accordance with manufacturers' specifications. See also Air Quality Mitigation Measure 5.13.3a and 5.13.3b, and Hazards and Hazardous Materials Mitigation Measure 5.9.2a. [5] The West Haul Road will be developed with clean gravel and watered at least twice daily to avoid generation of fugitive dust; where visible dust is generated, additional water will be applied to the haul road or vehicle speeds will be limited to 15 miles per hour. Additional dust and vehicle speed limits presented in Mitigation Measure 5.9.2a.	

Mitigation Measures 5.13.3a and 5.13.3b in Table S.2: Summary of Impacts and Mitigation Measures on EIR page 1-87 are revised as follows:

4.13.3	Impact of exposing nearby populations to short-term project-generated emissions of diesel PM.	S	**5.13.3a Diesel Particulate Matter Reduction - Off-road Equipment** The SFPUC shall ensure that construction-contract specifications include a requirement that all off-road diesel construction equipment is equipped with U.S. Environmental Protection Agency Tier 2 diesel engines as defined in U.S. Code of Federal Regulations, Title 40, Part 89 and are equipped with California Air Resources Board Level 3 Diesel Emission Control Strategies as defined in Title 13, California Code of Regulations, §§2700 through 2710 and meet the California Air Resources Board's most recent certification standards for off-road heavy duty	**LSM**

			diesel engines. The construction-contract specifications will require the contractor to submit a comprehensive inventory of all off-road construction equipment that will be used during any portion of the construction project. The inventory shall include each piece of equipment's license plate number, horsepower rating, engine production year, confirmation that the equipment contains a Level 3 abatement device verified by the California Air Resources Board, and projected hours of use or fuel throughput for each piece of equipment. The contractor shall update the inventory and submit it monthly to the SFPUC throughout the duration of the project. **5.13.3b Diesel Particulate Matter Reduction – On-site Haul Trucks ~~and Idling Limits~~** The SFPUC shall ensure that diesel-fueled haul trucks restricted to onsite routes are model year 2004 or newer. See also Air Quality Mitigation Measure 5.13.1b.	

A new table is provided in the Executive Summary, Table S.3: Summary of Impacts and Mitigation Measures for the Draft EIR Project, directly before the "References" subsection on EIR page 1-93:

(New) Table S.3: Summary of Impacts and Mitigation Measures for the Draft EIR Project and the CDRP Variant

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
4.3 Land Use, Agricultural Resources, and Recreation		
Impact 4.3.1: Impact of construction activities on the existing character of the vicinity of the proposed project.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.3.2: Impact of project operations on existing and/or planned land uses in the vicinity of proposed facilities.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.3.3: Consistency of proposed project with applicable land use plans, policies, and regulations adopted to avoid environmental impacts.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.3.4: Impact of construction activities on grazing land.	LS	LS
Mitigation Measures		
None required.	–	–

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.3.5: Impact of project operations on agricultural uses in the project vicinity.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.3.6: Impact of construction activities on established recreational uses in the vicinity of the proposed project site.	LSM	LSM
Mitigation Measures		
5.3.6: AMGEN Tour of California	X	X
5.9.2a: Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program	X	X
5.12.4a: Traffic Control Plan	X	X
5.13.1a: Fugitive dust mitigation recommended by the Bay Area Air Quality Management District	X	X
4.4 Vegetation and Wildlife (the level of significance shown is the most severe (worst-case) of the three determinations for impacts related to the construction, filling, and operations phases)		
Impact 4.4.1: Effect of CDRP on wetlands and other aquatic habitats.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
5.4.2: Habitat Restoration Measures	X	X
5.4.3: Compensation Measures	X	X
5.7.1: Storm Water Pollution Prevention Plan	X	X
Impact 4.4.2: Effect of CDRP on California red-legged frog.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
5.4.2: Habitat Restoration Measures	X	X
5.4.3: Compensation Measures	X	X
5.7.1: Storm Water Pollution Prevention Plan	X	X
Impact 4.4.3: Effect of CDRP on California tiger salamander.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
5.4.3: Compensation Measures	X	X
Impact 4.4.4: Effect of CDRP on Alameda whipsnake.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
5.4.3: Compensation Measures	X	X

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.4.5: Effect of CDRP on callippe silverspot butterfly.	LSM	LSM
Mitigation Measures		
5.4.3: Compensation Measures	X	X
5.13.1a: Fugitive dust mitigation recommended by the Bay Area Air Quality Management District	X	X
5.13.1b: BAAQMD-recommended exhaust emissions mitigation measures	X	X
5.9.2a: Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program	X	X
Impact 4.4.6: Effect of CDRP on bald eagle.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
Impact 4.4.7: Effect of CDRP on foothill yellow-legged frog.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
5.4.3: Compensation Measures	X	X
5.7.1: Storm Water Pollution Prevention Plan	X	X
Impact 4.4.8: Effect of CDRP on Heermann's kangaroo rat.	NI	NI
Mitigation Measures		
None required.	–	–
Impact 4.4.9: Effect of CDRP on other special-status species.	see 4.4.9 a, b, c below	
Impact 4.4.9a: Effect of CDRP on western pond turtle.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
Impact 4.4.9b: Effect of CDRP on nesting raptors.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
Impact 4.4.9c: Effect of CDRP on upland Species of Special Concern, bats, and migratory birds.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
5.4.3: Compensation Measures	X	X
Impact 4.4.10: Effect of CDRP on special-status plant species.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.4.11: Effect of CDRP on sensitive vegetation communities.	LSM	LSM
Mitigation Measures		
5.4.3: Compensation Measures	X	X
Impact 4.4.12: Effect of CDRP on local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LSM	LSM
Mitigation Measures		
5.4.1: Avoidance and Minimization Measures	X	X
5.4.2: Habitat Restoration Measures	X	X
5.4.3: Compensation Measures	X	X
5.7.1: Storm Water Pollution Prevention Plan	X	X
4.5 Fisheries and Aquatic Habitat		
Impact 4.5.1: Construction-related effects on fish occupying habitat in Calaveras Creek downstream of the existing dam.	LSM	LSM
Mitigation Measures		
5.5.1: Native Fish Capture and Relocation	X	X
Impact 4.5.2: Construction-related permanent loss of fish habitat in Calaveras Creek downstream of the existing dam.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.5.3: Effect of project on creating barriers to fish movement/migration upstream in Calaveras and Alameda Creeks.	NI	NI/B
Mitigation Measures		
None required.	–	–
Impact 4.5.4: Temporary effects on fisheries resources related to increases in sediments and turbidity and to release of and exposure to contaminants.	LSM	LSM
Mitigation Measures		
5.5.1: Native Fish Capture and Relocation	–	X
5.7.1: Storm Water Pollution Prevention Plan	X	X
Impact 4.5.5: Effects on native fish in Alameda Creek from the ACDD downstream to the confluence with Calaveras Creek.	LSM	B
Mitigation Measures		
5.5.5a: Resident Rainbow Trout Monitoring	X	–
5.5.5b: Resident Rainbow Trout Adaptive Management	X	–

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.5.6: Effects on native fish in Calaveras Creek below Calaveras Dam and in Alameda Creek downstream of the confluence with Calaveras Creek in the primary study area.	LS	B
Mitigation Measures		
None required.	–	–
Impact 4.5.7: Effects of project operations on fish habitat in Calaveras Reservoir and in streams upstream of the replacement dam.	B	B
Mitigation Measures		
None required.	–	–
Impact 4.5.8: Effects of project operations on native fish in Alameda Creek in the extended study area.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.5.9: Potential for conflict with local plans protecting fisheries and aquatic habitat.	LSM	LSM
Mitigation Measures		
5.5.1: Native Fish Capture and Relocation	X	X
5.5.5a: Resident Rainbow Trout Monitoring	X	–
5.5.5b: Resident Rainbow Trout Adaptive Management	X	–
5.7.1: Storm Water Pollution Prevention Plan	X	X
4.6 Hydrology		
Impact 4.6.1: Construction of the replacement dam would temporarily change flow rates in Calaveras and Alameda Creeks downstream of Calaveras Dam.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.2: Construction of the replacement dam would temporarily increase downstream flooding risk.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.3: Construction-related activities could affect local groundwater supplies in the vicinity of the dam.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.4: Operational effects on flows in Calaveras Creek downstream of Calaveras Dam.	LS	LS
Mitigation Measures		
None required.	–	–

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.6.5: Operational effects on flow in Alameda Creek downstream of the ACDD to the Calaveras Creek confluence.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.6: Operational effects on flow in Alameda Creek, Calaveras Creek confluence to Arroyo de la Laguna confluence.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.7: Operational effects on flow in Alameda Creek downstream of the Arroyo de la Laguna confluence.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.8: Downstream flooding and hazard in the event of dam failure.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.9: Effects on channel formation and sediment transport along Calaveras Creek.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.10: Effects on channel formation and sediment transport along Alameda Creek downstream of the ACDD to the Calaveras Creek confluence.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.11: Effects on channel formation and sediment transport along Alameda Creek downstream of the Calaveras Creek confluence.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.6.12: Changes in groundwater levels, flows, quality, and supplies.	LS	LS
Mitigation Measures		
None required.	–	–
4.7 Water Quality		
Impact 4.7.1: Impact on water bodies as a result of soil erosion and sediment discharge during construction.	LSM	LSM
Mitigation Measures		
5.7.1: Storm Water Pollution Prevention Plan	X	X

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.7.2: Impact on water bodies as a result of a hazardous materials release, NOA or metals release, or solid waste discharge during construction.	LSM	LSM
Mitigation Measures		
5.7.1: Storm Water Pollution Prevention Plan	X	X
5.7.2: Drilling Fluids	X	X
Impact 4.7.3: Impact on water bodies as a result of erosion and sediment discharge or a hazardous materials release associated with construction of barge docking facilities and during barging operation.	LSM	LSM
Mitigation Measures		
5.7.1: Storm Water Pollution Prevention Plan	X	X
Impact 4.7.4: Impact on reservoir water quality during and following inundation due to contact with borrow materials containing NOA, metals, or contaminants.	LSM	LSM
Mitigation Measures		
5.7.1: Storm Water Pollution Prevention Plan	X	X
5.8.3: Geology Evaluation for Disposal Site Stabilization	X	X
5.9.2a: Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program	X	X
Impact 4.7.5: Changes in water quality parameters in Calaveras Reservoir during future operation and restoration of pre-DSOD-restricted reservoir conditions.	B	B
Mitigation Measures		
None required.	–	–
Impact 4.7.6: Changes in water quality parameters in Calaveras and Alameda Creeks during future operation.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.7.7: Changes in groundwater quality related to construction and operations.	LSM	LSM
Mitigation Measures		
5.7.1: Storm Water Pollution Prevention Plan	X	X
4.8 Geology, Soils, and Seismicity		
Impact 4.8.1: Landslide activation as a result of construction activities, resulting in structural damage and injuries.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.8.2: Impacts of excavation, placement of fill, and other construction activities on soils with severe erosion and slope instability hazards.	LSM	LSM
Mitigation Measures		
5.7.1: Storm Water Pollution Prevention Plan	X	X

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.8.3: Impacts of excavation, placement of fill, and other construction activities on soils with severe erosion and slope instability hazards.	LSM	LSM
Mitigation Measures		
5.8.3: Geotechnical Evaluation for Disposal Site Stabilization	X	X
Impact 4.8.4: Seismic hazards at the replacement dam.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.8.5: Hazards of seismically induced ground failure, including liquefaction, lateral spreading, and settlement at disposal fill sites.	LSM	LSM
Mitigation Measures		
5.8.3: Geotechnical Evaluation for Disposal Site Stabilization	X	X
Impact 4.8.6: Impacts on project structures and buried utilities from expansive or corrosive soils.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.8.7: Induced seismic activity from reservoir refilling.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.8.8: Alteration of the existing topography and geology features of the site.	LS	LS
Mitigation Measures		
None required.	–	–
4.9 Hazards and Hazardous Materials		
Impact 4.9.1: Release of hazardous materials in soil and groundwater during construction.	LSM	LSM
Mitigation Measures		
5.9.1: Groundwater at Former Calaveras Test Site	X	X
Impact 4.9.2: Release of airborne NOA and naturally occurring metals from excavation, hauling, blasting, tunneling, placement, and on-site disposal of Franciscan Complex serpentinite or mélange.	LSM	LSM
Mitigation Measures		
5.9.2a: Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program	X	X
5.9.2b: Construction Worker Protection	X	X
5.9.2c: Watershed Keeper's Residence	X	X
5.9.2d: Excavation Materials Management Plan	X	X

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.9.3: Potential for an explosion due to gassy conditions during excavation and tunneling.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.9.4: Increased risk of fires in an area of high fire danger.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.9.5: Release of hazardous building materials from demolition of existing structures.	LSM	LSM
Mitigation Measures		
5.9.5: Hazardous Materials in Structures to Be Demolished	X	X
Impact 4.9.6: Release of fuel and other hazardous materials to the environment, including Calaveras Reservoir.	LSM	LSM
Mitigation Measures		
5.7.1: Storm Water Pollution Prevention Plan	X	X
Impact 4.9.7: Fire and safety hazards from use of explosives during construction.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.9.8: Effect of raising the reservoir level following construction on groundwater plume migration or natural attenuation of trichloroethene in the groundwater at the Calaveras Test Site or water quality in Calaveras Reservoir.	LS	LS
Mitigation Measures		
None required.	–	–
4.10 Cultural Resources		
Impact 4.10.1: Impact of construction activities on known archaeological resources.	LSM	LSM
Mitigation Measures		
5.10.1: Archaeological Evaluation and Monitoring, and Treatment of Haman Remains	X	X
Impact 4.10.2: Impact of construction activities on unknown archaeological resources.	LSM	LSM
Mitigation Measures		
5.10.2: Accidental Discovery Measures	X	X
Impact 4.10.3: Impact of restoration of reservoir water levels and project operations on known archaeological resources.	LSM	LSM
Mitigation Measures		
5.10.1: Archaeological Evaluation and Monitoring, and Treatment of Haman Remains	X	X

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.10.4: Construction impacts on historic architectural resources.	NI	NI
Mitigation Measures		
None required.	–	–
Impact 4.10.5: Construction impacts on unknown paleontological resources.	LSM	LSM
Mitigation Measures		
5.10.5: Paleontological Resources	X	X
Impact 4.10.6: Impact of restoration of reservoir water levels and project operations on unknown paleontological resources.	LS	LS
Mitigation Measures		
None required.	–	–
4.11 Visual Resources		
Impact 4.11.1: Impact of construction activities on scenic vistas, scenic resources, and visual character when viewed from the Sunol Wilderness.	SU (temporary)	SU (temporary)
Mitigation Measures		
None required.	–	–
Impact 4.11.2: Impact of site disturbance on scenic vistas, scenic resources, and visual character when viewed from the Sunol Wilderness.	SU	SU
Mitigation Measures		
5.4.2: Habitat Restoration Measures	X	X
Impact 4.11.3: Impact of project operations on scenic vistas, scenic resources, and visual character when viewed from the Sunol Wilderness.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.11.4: Impact of construction activities and site disturbance on scenic views from county roads.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.11.5: Impact of construction activities on nighttime light conditions.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.11.6: Impact of project operations on scenic views from county roads.	LS	LS
Mitigation Measures		
None required.	–	–

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
4.12 Transportation and Circulation		
Impact 4.12.1: Traffic delays due to temporary land and road closures during construction.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.12.2: Short-term traffic increases on area roadways due to construction-related traffic.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.12.3: Impaired access to adjacent roadways and land uses for emergency service providers.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.12.4: Increased potential for traffic safety hazards for vehicles and bicyclists on public roadways during construction.	SU	SU
Mitigation Measures		
5.12.4a: Traffic Control Plan	X	X
5.12.4b: Approval for Road Closures	X	X
Impact 4.12.5: Increased wear and tear on the designated haul routes used by construction vehicles.	LSM	LSM
Mitigation Measures		
5.12.4a: Traffic Control Plan	X	X
Impact 4.12.6: Long-term traffic associated with operation and maintenance of the replacement dam.	LS	LS
Mitigation Measures		
None required.	–	–
4.13 Air Quality		
Impact 4.13.1: Impact of short-term increases in emissions of criteria air pollutants and precursors.	LSM/SU*	LSM/SU*
Mitigation Measures		
5.13.1a: Fugitive dust mitigation recommended by the Bay Area Air Quality Management District	X	X
5.13.1b: BAAQMD-recommended exhaust emissions mitigation measures	X	X
5.13.3a: Diesel Particulate Matter Reduction- Off-road Equipment	X	X
5.13.3b: Diesel Particulate Matter Reduction- On-site Haul Trucks and Idling Limits	X	X
5.9.2a: Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program	X	X

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.13.2: Impact of long-term generation of regional and local criteria air pollutants and precursors.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.13.3: Impact of exposing nearby populations to short-term project-generated emissions of diesel PM.	LSM	LSM
Mitigation Measures		
5.13.1b: BAAQMD-recommended exhaust emissions mitigation measures	X	X
5.13.3a: Diesel Particulate Matter Reduction- Off-road Equipment	X	X
5.13.3b: Diesel Particulate Matter Reduction- On-site Haul Trucks	X	X
Impact 4.13.4: Impact of exposing sensitive receptors to long-term emissions of TACs.	NI	NI
Mitigation Measures		
None required.	–	–
Impact 4.13.5: Impact of exposing sensitive receptors to emissions of odors.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.13.6: Impact of increasing criteria air pollutant and ozone precursor emissions that would conflict with or obstruct implementation of the applicable air quality plan.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.13.7: Impact of increasing GHG emissions that conflict with the state goal of reducing GHG emissions in California to 1990 levels by 2020 (e.g., a substantial contribution to global climate change) or conflict with San Francisco's Climate Action Plan such that emissions would impede implementation of the local GHG reduction goals established by San Francisco's 2008 Greenhouse Gas Reduction Ordinance.	LS	LS
Mitigation Measures		
None required.	–	–
4.14 Noise and Vibration		
Impact 4.14.1: Disturbance from temporary construction-related noise increases.	SU	SU
Mitigation Measures		
5.14.1: Noises Controls	X	X

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.14.2: Temporary noise disturbance along construction haul routes.	LSM	LSM
Mitigation Measures		
5.14.1: Noises Controls	X	X
Impact 4.14.3: Disturbance due to construction-related controlled blasting.	LSM	LSM
Mitigation Measures		
5.14.3: Blasting Noise Control	X	X
Impact 4.14.4: Disturbance due to construction-related vibration.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.14.5: Disturbance due to long-term noise increases associated with operation of project facilities.	LS	LS
Mitigation Measures		
None required.	–	–
4.15 Utilities, Service Systems, and Public Services		
Impact 4.15.1: Impact of construction activities on the demand for fire protection services.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.15.2: Impact of construction activities on the demand for law enforcement services.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.15.3: Impact of construction activities on the demand for landfill capacity.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.15.4: Impact of construction activities on electrical transmission lines to Calaveras Dam and related structures.	LS	LS
Mitigation Measures		
None required.	–	–
4.16 Mineral and Energy Resources		
Impact 4.16.1: Impact of using rock, clay, and sand to construct the replacement dam.	LS	LS
Mitigation Measures		
None required.	–	–
Impact 4.16.2: Impact of temporary increase in energy use to construct the replacement dam.	LSM	LSM
Mitigation Measures		
5.13.1b: BAAQMD-recommended exhaust emissions mitigation measures	X	X

continued

Table S.3 (Continued)

Impact	**Draft EIR Project Level of Significance**	**CDRP Variant Level of Significance**
Impact 4.16.3: Impact of using electric power to operate the replacement dam and filled reservoir.	NI	NI
Mitigation Measures		
None required.	–	–

Notes:

NI – No impact	B – Beneficial
LS – Less than significant	LSM – Less than significant with mitigation
SU – Significant and unavoidable	
X – Mitigation measure applies to this impact	– Mitigation measure does not apply

* Significance determination under the 1999 BAAQMD CEQA thresholds of significance / Significance determination under the 2010 BAAQMD CEQA thresholds of significance

A new table is provided in the Executive Summary, Table S.4: Summary of Mitigation Measures for the CDRP Variant, after new Table S.3 and directly before the "References" subsection on EIR page 1-93:

(New) Table S.4: Summary of Mitigation Measures for the CDRP Variant

MITIGATION MEASURE
5.3 Land Use, Agricultural Resources, and Recreation
5.3.6 AMGEN and Primavera Bicycling Tours The San Francisco Public Utilities Commission (SFPUC) shall coordinate with the organizers of the AMGEN Tour of California bicycle tour and the Fremont Freewheelers Bicycle Club Primavera bicycle tour to ensure that temporary road closures, haul truck traffic, and other activities related to project construction will not interfere with these tours. Construction activities may be temporarily suspended as needed to prevent conflicts with the AMGEN and Primavera bicycle tours.
5.4 Vegetation and Wildlife
5.4.1 Avoidance and Minimization Measures The SFPUC and its contractors shall implement the following measures to avoid and minimize potential impacts of the proposed project on special status species and sensitive habitats. These measures apply to both on-site construction and off-site mitigation areas. **5.4.1a Pre-Construction Measures** • **Wetland Buffers.** Except for those areas specifically identified in Table 4.4.9, Impacts of Construction on Wetlands and Other Waters of the State and United States, where impacts cannot be practicably avoided, a minimum 100-foot buffer surrounding all wetlands, ponds, streams, drainages, and other aquatic habitats located on or within 100 feet of the project site shall be clearly designated on the final project construction plans and marked on the site with orange construction fencing or silt fence. If the area is on a slope, silt fencing or other comparable management measures will be installed to prevent polluted runoff, as well as equipment, from entering the buffer area. Signs shall be installed every 100 feet on or adjacent to the buffer fence that read, Environmentally Sensitive Area - Keep Out." Fencing and

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.4.1a Pre-Construction Measures (continued) management measures shall be installed and inspected prior to initial project construction and maintained through the construction period. No equipment mobilization, grading, clearing, storage of equipment or machinery, vehicle or equipment washing, or similar activity, may occur until a representative of the SFPUC has inspected and approved the fencing and/or management measures installed around these features. • **Temporary Stream Crossings.** The final project construction plans shall be designed to minimize the number of temporary stream crossings necessary for project site access and construction. Stream crossings shall be located to the maximum extent practicable in previously disturbed areas lacking riparian vegetation, pools, side ponds, or other sensitive habitat features. • **Worker Education Program.** A worker education program shall be implemented to familiarize workers, including all vehicle operators, of the importance of avoidance of harm to special-status species and sensitive natural communities. The training shall include a discussion of the importance of maintaining speed limits, appropriate disposing of trash and waste materials, and respecting exclusion zones. The SFPUC and its construction contractor shall confirm that all workers have been trained appropriately. • **Aquatic Habitat Pre-construction Survey.** For 2 weeks prior to the commencement of work activities and immediately prior to commencement of work, a qualified biologist will survey aquatic habitat that is suitable for the California red-legged frog, California tiger salamander, foothill yellow-legged frog, and western pond turtle and that would be affected by the project. If individuals in any life stages of these species are found, the biologist will contact the U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Game (CDFG) to determine whether relocating any life stages is appropriate. The aquatic habitat areas that cannot feasibly be avoided during project construction (Table 4.4.9, Impacts of Construction on Wetlands and Other Waters of the State and United States), will be dewatered prior to construction (except Calaveras Reservoir). Areas that would be dewatered (assuming seasonal flows or water is present) are Pond 9 and freshwater marsh, and perennial streams, including Calaveras Creek downstream of the dam. A qualified full-time monitor will be present until ponds and streams are fully dewatered. Intake screens will not exceed a mesh size of 5 millimeters. If any of these species are found during dewatering, the qualified biologist will contact the USFWS and/or CDFG to determine whether relocating individuals during any life stages is appropriate. The qualified biologist will remove and/or destroy any individuals of non-native species, such as bullfrogs, crayfish, and centrarchid fishes from within the dewatered habitat, to the maximum extent possible. • **California Tiger Salamander Pre-construction Survey.** A preconstruction survey will be conducted at each work site where there would be ground-disturbing activities to identify suitable California tiger salamander burrow aestivation areas. Aestivation habitat will be defined as the presence of two or more small mammal burrows greater than 1 inch in diameter within a 10-foot-diameter area and within 10 feet of proposed construction sites (i.e., the presence of a single isolated gopher hole would not be considered habitat). As feasible within the context of the work area, aestivation areas will be temporarily fenced and avoided.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.4.1a Pre-Construction Measures (continued)

A California tiger salamander salvage and relocation plan will be prepared in coordination with USFWS and CDFG. A qualified biologist will carry out the salvage and relocation operations at construction sites where upland habitat has been identified. Surveys and trapping of California tiger salamanders will occur in the rainy season prior to construction or as directed by resource agency permits. The effort shall be appropriately timed with respect to salamander activity for the year and proposed construction activities. Drift fences and pitfall traps within or on the perimeter of construction sites will be used to capture and relocate animals to suitable areas nearby that will not be affected by construction. USFWS trapping protocols will be followed. Exclusion fencing (described in Mitigation Measure 5.4.2, Construction Measures) will be regularly maintained and monitored until the start of and throughout construction.

- **Johnny Jump-up.** Prior to commencement of ground-disturbing activities, a qualified botanist shall flag and oversee fence installation around all stands of johnny jump-up (Viola pedunculata) mapped during studies for this project (ETJV 2006 and Entomological Consulting Services 2004) within the construction footprint that can be avoided. These fenced areas shall be avoided during construction.

- **Bald Eagle Pre-construction Survey.** A qualified biologist will conduct monitoring in the months of December, January, and February, before construction begins, to determine whether bald eagles are nesting at Calaveras Reservoir.

  A minimum 660-foot no-disturbance buffer will be established around any active bald eagle nest near the construction site.

  If an active bald eagle nest is observed within 660 feet of the west haul road, the haul route would not be used without additional coordination with USFWS and CDFG.

  If the project cannot be altered to ensure that project construction, including the use of the barge haul route, would avoid potentially causing a bald eagle nest to fail, SFPUC will coordinate with CDFG and USFWS to determine whether hazing measures may be appropriate.[6] Hazing measures (e.g., frequent human activity at the nest site, use of loud noises at nest trees) would be implemented to prevent use of the nest only if egg laying had not yet commenced and would be implemented early enough in the nesting season for the eagles to use an alternate location. If hazing is not effective, a structure to exclude bald eagles from any constructed nests (e.g., a cone-shaped enclosure that would preclude eagles from accessing the nest) may be installed. Take authorization, if allowed, under the Bald and Golden Eagle Act[7] would be required for such measures.

- **Ground-nesting Raptor, Burrowing Owl and Northern Harrier Pre-construction Surveys.** No more than 2 weeks before construction, a survey for ground-nesting raptors, burrowing owls and northern harriers, will be conducted by a qualified biologist in suitable habitat within 500 feet of the project. Surveys will also be conducted through the reservoir refilling period in suitable habitat in the area that would be inundated by the reservoir. Surveys will conform to the protocol described by the California Burrowing Owl Consortium, which includes up to four surveys on different dates if there are suitable burrows present (Burrowing Owl Consortium 2009). This protocol would be suitable to identify northern harrier nests concurrent with burrowing owl surveys.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.4.1a Pre-Construction Measures (continued)

If occupied owl burrows or harrier nests are found within the survey area, a determination will be made by a qualified biologist, in coordination with the CDFG, as to whether or not work or refilling of the reservoir will disrupt reproduction.

If it is determined that construction will not affect occupied burrows or northern harrier nests or disrupt breeding behavior, construction will proceed without any restriction or mitigation measures. If it is determined that construction or refilling of the reservoir will affect occupied burrows during August through February, subject owls will be passively relocated from the occupied burrow(s) using one-way doors installed at the entrance. There will be at least two unoccupied burrows suitable for burrowing owls within 300 feet of the occupied burrow (or the limit of construction or re-filling) before one-way doors are installed. Artificial burrows will be in place at least 1 week before one-way doors are installed on occupied burrows. One-way doors will be in place for a minimum of 48 hours before burrows are excavated.

If it is determined that construction will physically affect occupied owl burrows or active northern harrier nests or disrupt reproductive behavior during the nesting season (March through July), then avoidance is the only mitigation available. Construction will be delayed within 300 feet of occupied owl burrows or northern harrier nests until it is determined that the subject owls or harriers are not nesting or until a qualified biologist determines that juvenile owls or harriers are self-sufficient or are no longer using the natal burrow or nests as their primary source of shelter. Alternatively, other appropriate avoidance measures, as approved by CDFG may be implemented to ensure that the nest is protected.

If it is determined that reservoir refilling will flood occupied burrows or active nests, or disrupt reproductive behavior during the nesting season (March through July) then SFPUC will, subject to approval by CDFG, prevent the death of viable eggs or young by relocating them to an appropriate wildlife care facility or implementing other measures recommended by CDFG.

- **Other Tree- or Cliff-Nesting Raptor Pre-construction Survey.** A survey to identify active nests for tree- or cliff-nesting raptors (including bald eagles) will be conducted by a qualified biologist no more than 2 weeks before the start of construction at project sites from February 1 through July 30.

  Active raptor nests located within 500 feet (0.25 mile for golden eagle and bald eagle or falcons) of the project will be mapped, to the extent allowed by access.

  If an active bald eagle nest is found, implement nest protection measures described previously for bald eagles. If an active raptor nest is found within 500 feet (0.25 mile for golden eagle or falcons) of the project, a determination will be made by a qualified biologist, in coordination with the CDFG, as to whether or not construction work will affect the active nest or disrupt reproductive behavior. Criteria used for this evaluation will include, but not be limited to, presence of visual screening between the nest and construction activities, and behavior of adult raptors in response to the surveyors or other ambient human activity. Alternatively, other appropriate avoidance measures, as approved by CDFG may be implemented to ensure that the nest is protected.

  If it is determined that construction will not affect an active nest or disrupt breeding behavior, construction will proceed without any restriction or mitigation measure.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.4.1a Pre-Construction Measures (continued)

If it is determined that construction will affect an active raptor nest or disrupt reproductive behavior, then avoidance is the only mitigation available. Construction will be delayed within 300 feet (0.25 mile for golden eagle or falcons) of such a nest until a qualified biologist determines that the subject raptors are not nesting.

- In coordination with CDFG, trees with unoccupied raptor nests (excluding golden and bald eagle) may only be removed prior to March 1 or following the determination that subject raptors are not nesting.
- **Loggerhead Shrike, Grasshopper Sparrow, and Tricolored blackbird Pre-construction Surveys.** Pre-construction surveys shall be conducted by a qualified biologist, in suitable habitat, for loggerhead shrike, grasshopper sparrow, and tricolored blackbird no more than 14 days prior to the beginning of any construction activity between March 1 and August 15. The survey area shall include all potential nesting sites located within 100 feet of the area to be disturbed.

  If an active nest of one of these species is found within 100 feet of the project, a determination will be made by a qualified biologist, in coordination with the CDFG, as to whether or not construction work will affect the active nest or disrupt reproductive behavior. Criteria used for this evaluation will include, but not be limited to, presence of visual screening between the nest and construction activities, and behavior of the adult birds in response to the surveyors or other ambient human activity. If construction activities have the potential to threaten the viability of an active nest discovered during the survey, then either a minimum 100-foot buffer will be flagged around the active nest and designated a construction-free zone until the nest is no longer active or other appropriate avoidance measures, including a reduced buffer size, approved by CDFG, are implemented to ensure that the nest is adequately protected. Exact implementation of this measure shall be based on specific information at the project site.
- **Swallow Exclusion.** At least 6 months prior to the start of construction, a qualified biologist shall identify swallow colonies nesting within 100 feet of construction areas. During the months of September through February, a qualified biologist shall supervise the installation of netting or screens to prevent colonies from becoming established on or near structures or cliffs that would be destroyed by construction (after verifying that no swallows would be trapped).
- **Bat Exclusion.** At least 6 months prior to the start of construction, a qualified biologist shall identify potential bat maternity sites within 500 feet of construction areas. During the months of November through February, a qualified biologist shall supervise the installation of screens at potential roosts to prevent bat use (after verifying that no bats would be trapped by screening).

  If potential maternity roost sites cannot be screened in advance, pre-construction surveys shall be conducted by a qualified biologist, in suitable rock outcrop and developed habitat for Townsend's big-eared bat, pallid bat, and western mastiff bat, no more than 14 days and no less than 7 days prior to the beginning of any construction activity between March 1 and October 31. The survey area shall include all potential maternity sites located within 500 feet of the area to be disturbed.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.4.1a Pre-Construction Measures (continued) If an active maternity site is found within 500 feet of the project, a determination will be made by a qualified biologist, in coordination with the CDFG, as to whether or not construction work will affect the site or disrupt reproductive behavior. Criteria used for this evaluation will include, but not be limited to, presence of visual and audio screening between the site and construction activities. If construction activities have the potential to threaten the viability of an active maternity site discovered during the survey, then a minimum 500-foot buffer will be flagged around the site and designated a construction-free zone until the site is no longer active or other appropriate avoidance measures, including a reduced buffer size, approved by CDFG, are implemented to ensure that the site is adequately protected. Exact implementation of this measure shall be based on specific information at the project site. • **Most Beautiful Jewel-flower Buffer.** Before the initiation of any ground-disturbing or vegetation-clearing activities at Disposal Site 7 and Disposal Site 7 haul roads, a qualified botanist shall supervise the installation of barrier fencing on the perimeter of the work area within 200 feet of mapped most beautiful jewel-flower populations and Diablo helianthella populations. Signs shall also be installed every 100 feet on the fence line to identify the sensitive area (e.g., "Environmentally Sensitive Area – Keep Out"). No construction-related activities shall be permitted within the limits of the populations. The contractor shall maintain the fencing throughout construction of the CDRP. [6] This is a precautionary measure included in the event that a new bald eagle nest location that cannot feasibly be avoided is established within 660 feet of the project footprint prior to construction. [7] Currently, there is no regulatory mechanism in place under the Bald and Golden Eagle Act that permits take of bald or gold eagles comparable to under the federal Endangered Species Act (FESA). USFWS has proposed to add a new section at Title 50 of the Code of Federal Regulations, Section 22.26, to authorize the issuance of permits to take bald and golden eagles on a limited basis. In comparison with requirements under FESA, permitting process proposed under the Eagle Act is expected to be less burdensome to comply with while continuing to provide appropriate protection for bald and golden eagles. Take of bald or golden eagles would be authorized only where it is determined to be compatible with the preservation of bald and golden eagles and cannot praticably be avoided (USFWS 2007, p. 31141).
5.4.1b Construction Measures • **Wetlands and Other Waters.** Construction activities shall be avoided in saturated or ponded wetlands and streams (typically during the spring and winter) to the maximum extent practicable. Where wetlands or other water features must be disturbed, the minimum area of disturbance necessary for construction shall be identified and the area outside of that minimum area shall be avoided. • **Exclusion Fencing.** The SFPUC shall ensure that the temporary exclusion fencing and/or other protective measures are continuously maintained until construction activities in the area of interest are completed. Exclusion fencing for establishing protective buffers shall be clearly visible (e.g., orange plastic). Barrier fencing for the California tiger salamander and Alameda whipsnake may be constructed of various materials but shall be buried deep enough (6–8 inches) and shall be tall enough (at least 24 inches above ground) to prevent the passage of

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.4.1b Construction Measures (continued) target species. No construction activities, including movement of equipment, storage of materials or temporary stockpiling of spoils, will be allowed within fenced areas protecting sensitive habitats. All exclusion fencing shall be removed at the end of construction activities. • **Wetland Soils and Vegetation.** To minimize the degradation of saturated wetland soils and vegetation where avoidance is not practicable, protective practices such as use of geotextile cushions and other materials (e.g., timber pads, prefabricated equipment pads, thick vegetative slash, geotextile fabric free of plastic monofilament and nylon wire) and/or vehicles with balloon tires will be employed. • **Streams and Drainages.** Stabilize banks of all streams and drainages disturbed during construction, including banks of Alameda and Calaveras Creeks, using a non-vegetative material that will protect the soil from erosion by wind or water initially and break down within a few years (e.g., jute matt). To minimize entrapment of amphibians and snakes, any geotextile fabrics used shall be free of plastic monofilament and nylon wire. If visual evidence of erosion (e.g., rilling or scour) is observed, geotextile mats, excelsior blankets, or other soil stabilization products shall also be used. • **Vegetation Removal.** During construction, immediately remove trees, shrubs, debris, soils, or construction materials that are inadvertently deposited below the ordinary high-water mark of any streams, drainages, ponds, wetlands, riparian areas, and Calaveras Reservoir in a manner that minimizes disturbance of the drainage bed and bank (e.g., manually). Such materials will be placed either in soil stock piles or appropriately managed waste collection containers until the materials can be properly disposed of. • **Stream Crossing Locations.** Whenever possible, stream crossings shall be located on straight, relatively flat stream segments. • **Use of Stream Crossings.** Stream crossing construction activities shall be timed to minimize impacts on wildlife and fish, including but not limited to the foothill yellow-legged frog. Installation or removal of crossings shall occur during dry conditions, preferably in summer when water flows are minimal. If necessary, stream flow shall be diverted through temporary culverts, conduits or like feature while stream crossings are being installed. Diversion culverts or conduits shall be sized to accommodate flows from flash flooding. • **Culvert design.** Culverts for temporary stream crossings in fish-bearing streams must allow for fish passage, and the outflow of the culvert shall not create a waterfall. If possible, install and remove culverts when the streambed is dry. In a flowing stream channel, use sediment basins, a temporary diversion channel, or a dam and pump set-up to divert water during installation and removal of culverts. • **Construction of Stream Crossings.** Temporary stream crossings constructed using temporary bridges shall have clean gravel approach ramps. Temporary culverts shall be backfilled with clean gravel/cobbles and topped with a gravel road base. Earth and rockfill material shall not be placed in stream channels. Approaches shall be stabilized using an appropriate type of geotextile covered with clean rock. Material shall extend at least 50 feet on both sides of the crossing if soft soil conditions exist or if they will be used for construction traffic during the rainy season.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.4.1b Construction Measures (continued)

- **Alameda Whipsnake Avoidance.** Vegetation clearing and initial ground disturbance activities in stands of scrub habitat that are potentially occupied by Alameda whipsnake and that cannot be avoided will be monitored by a qualified biologist. The biologist will conduct surveys and relocate any whipsnakes immediately prior to equipment clearing. Prior to clearing, escape routes that include natural vegetative cover will be provided to allow Alameda whipsnakes to move from the scrub habitat to other habitat outside of the construction area.

  Stands of Alameda whipsnake scrub habitat that cannot be avoided will be hand-cleared, or a qualified biologist will do surveys and relocate any whipsnakes immediately prior to equipment clearing. Prior to clearing, escape routes that include natural vegetative cover shall be provided to allow Alameda whipsnakes to move from the scrub habitat to other habitat outside of the construction area.

Trenches or pits constructed in scrub or rock outcrop habitat will include escape ramps constructed of earthfill or wooden planks inspected by a qualified biologist to prevent entrapment of Alameda whipsnake and other animals.

SFPUC will install barrier fencing at selected locations to exclude Alameda whipsnakes from entering construction areas, haul roads, and access roads. Fencing locations will be based on observations of Alameda whipsnakes or the presence of habitats that are likely to support higher densities of this species. Other portions of the haul route and construction work areas would not be fenced, based on coordination with CDFG and USFWS. SFPUC shall monitor disturbance areas to determine whether additional fencing is necessary to minimize potential impacts.

5.4.2 Habitat Restoration Measures

The SFPUC shall restore the habitat functions and services of areas that are subject to temporary disturbance during project construction. Site restoration shall be undertaken in accordance with a detailed restoration plan or plans prepared by a qualified restoration ecologist and shall be consistent with all required permits. The final habitat restoration plan or plans shall provide, at minimum:

5.4.2a Habitat Restoration Goals and Objectives

Timeframes provided for the following goals and objectives are the goals for meeting success criteria, not for initiating restoration actions. Replanting and grading would begin as soon as practicable, but no later than one year following completion of construction.

- Restore temporary impacts on wetlands and streams located above the 756-foot inundation elevation within the reservoir, as well as downstream of the replacement dam and within the limit of work at Calaveras Creek within 3 years of completion of construction.
- Restore temporary impacts on annual grasslands within the limit of work located above the 756-foot inundation elevation within 3 years of completion of construction.

5.4.2b Restoration Plan

The final habitat restoration plan(s) shall include detailed written specifications and work descriptions for the restoration projects, including, as applicable but not limited to: the geographic boundaries of the projects; construction methods; timing and sequence; sources of water, including connections to existing waters and uplands; soil properties (e.g., particle size, organic content); methods for establishing the desired plant communities; plans to control invasive plant species;

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.4.2b Restoration Plan (continued)

dewatering information, if applicable; proposed grading plans, including elevations and slopes of the substrate; soil management; and erosion control measures. For stream restoration, the restoration plan(s) shall also include: planform geometry; channel form (e.g., typical channel cross-sections and longitudinal profiles); stream type (i.e., ephemeral, intermittent, or perennial); location in watershed; watershed size (i.e., drainage area); mean annual precipitation; channel-forming discharge (i.e., design discharge); and riparian area plantings. The restoration plan will be completed in coordination with applicable permitting agencies.

5.4.2c Success Criteria, Monitoring, and Adaptive Management

The final habitat vegetation restoration plan(s) shall include ecologically based criteria that will be used to determine whether the restoration projects are achieving identified objectives. The success criteria shall be based on attributes that are objective and verifiable. The final restoration plan(s) shall include a description of parameters to be monitored and reported in order to determine whether the restoration projects are on track to meet success criteria and whether adaptive management is needed. A schedule for monitoring and reporting on monitoring results must be included, as determined in coordination with applicable permitting agencies and/or as needed to verify whether the vegetation is fully established and self-sustaining.

5.4.3 Compensation Measures

The SFPUC shall compensate for unavoidable impacts on special-status species and sensitive habitats in accordance with a detailed compensation plan or plans. The compensation plan(s) shall be prepared by a qualified restoration ecologist and shall be consistent with all required permits. The final compensation plan(s) shall fully compensate for direct and indirect impacts on special-status species and for the temporal, long-term, and permanent losses of habitat areas, functions, and services and shall include: a description of the resource types and amounts that will be provided; the methods of compensation (i.e., restoration, rehabilitation, re-establishment, establishment, enhancement, and/or preservation); and the manner in which the resource functions and services of the compensation project will address the related project impacts. The final compensation acreages will be determined in consultation with the permitting agencies, with further details specified in the compensation plan(s). The final compensation plan(s) shall include the following sections:

5.4.3a (Variant) Compensation Goals and Objectives

Timeframes provided for the following goals and objectives are the goals for meeting success criteria, not for initiating compensation actions. Replanting and grading would begin as soon as practicable, but no later than one year following completion of construction.

- **Wetlands and Other Waters.** Fully compensate for impacts on approximately 4.64 acres of wetlands and open water, and 4,682 linear feet of stream habitat by establishing and enhancing wetlands, and enhancing streams and open water habitat at the proposed mitigation areas within 5 to 10 years of completion of construction.
- **Riparian Habitat.** Fully compensate for impacts on approximately 8.0 acres of riparian habitat by enhancing, establishing, and rehabilitating riparian habitat at the proposed mitigation areas within 10 years of completion of construction.
- **Oak Woodlands and Savannah.** Fully compensate for impacts on approximately 24.3 acres of oak woodland and savannah habitat by enhancing and establishing oak woodland

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.4.3a (Variant) Compensation Goals and Objectives (continued)

and savannah habitat at the proposed mitigation areas within 10 years of completion of construction. Impacts on oak woodlands and savannah may also be compensated for in whole or in part through a contribution to the Oak Woodlands Conservation Fund as established under subdivision (a) of Section 1363 of the Fish and Game Code.

- **California Red-legged Frog Habitat.** Fully compensate for impacts on approximately 0.14 acres and 10,366 linear feet of California red-legged frog aquatic breeding habitat, and fully compensate for any loss of California red-legged frog at the Alameda Creek Diversion Dam (ACDD) and breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek that may result from a potentially increased bullfrog population by enhancing, establishing, and/or preserving aquatic breeding habitat through predator control and vegetation management, and preserving aquatic breeding habitat in impaired water bodies in the proposed mitigation areas within 5 years of completion of construction, and by improving breeding habitat conditions in Alameda Creek from the ACDD to the Calaveras Creek confluence beginning with the advent of bypass flows; fully compensate for permanent impacts on approximately 2.33 acres and 4,387 linear feet of California red-legged frog aquatic non-breeding and 656 acres of upland habitat within 5 years of completion of construction by enhancing and/or establishing and protecting aquatic non-breeding habitat and enhancing and/or establishing and preserving upland/dispersal habitat at the proposed mitigation areas within 10 years of completion of construction.
- **California Tiger Salamander Habitat.** Fully compensate for impacts on approximately 0.11 acres of California tiger salamander aquatic habitat by enhancing, establishing, and preserving aquatic habitat through predator control and vegetation management in impaired water bodies in the proposed mitigation areas within 5 years of completion of construction; fully compensate for permanent impacts to 972.0 acres of upland habitat by enhancing, establishing, and/or preserving upland habitat within 10 years of completion of construction.
- **Alameda Whipsnake Habitat.** Fully compensate for impacts on approximately 33 acres of scrub/shrub habitat and 13.7 acres of rock outcrop habitat for the Alameda whipsnake by enhancing and/or establishing scrub habitat and protecting rock outcrops at the Sage Canyon Mitigation Area within 5 years of completion of construction; fully compensate for permanent impacts to approximately 607.4 acres of woodland and grassland habitat by enhancing and/or establishing grasslands and woodlands adjacent to scrub at the proposed mitigation areas within 10 years of completion of construction.
- **Callippe Silverspot Butterfly Habitat.** Fully compensate for impacts on approximately 0.57 acres of callippe silverspot butterfly larval habitat by enhancing, establishing and/or protecting grasslands containing the larval host plant (*Viola pedunculata*) at the proposed mitigation areas within 10 years of completion of construction.
- **Foothill Yellow-legged Frog Habitat.** Document that project benefits to foothill yellow-legged frog habitat in Alameda Creek from the ACDD to the Calaveras Creek confluence fully compensate for any loss of foothill yellow-legged frog at the ACDD and for the loss of approximately 9,421 linear feet (approximately 1.8 miles) of habitat in Arroyo Hondo, fully compensate for 0.03 acre of aquatic habitat at the ACDD, and for any loss of breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek that may result from a

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.4.3a Compensation Goals and Objectives (continued)

potentially increased bullfrog population through monitoring and adaptive management within 5 years of the start of bypass flows at the ACDD.

- **Annual Grasslands.** Fully compensate for impacts on approximately 418 acres of annual grassland habitat by enhancing native perennial grasslands and enhancing and protecting non-native annual grasslands at the proposed mitigation areas within 5 years of completion of construction.
- **Serpentine Grasslands.** Fully compensate for impacts on approximately13.6 acres of serpentine grassland habitat by enhancing and protecting serpentine grasslands at the Goat Rock Mitigation Area within 5 years of completion of construction.

5.4.3b Site Selection

The final compensation plan(s) shall include a description of the factors considered during the final mitigation site selection process, including consideration of watershed needs and the practicability of accomplishing ecologically self-sustaining habitats at the mitigation sites. All sites selected must be known to support, or be able to support, the required habitat functions and services, or as otherwise determined in consultation with permitting agencies.

5.4.3c Site Protection Instrument

The final compensation plan(s) shall include a description of the legal arrangements and instruments, including site ownership, that will be used to ensure the long-term protection of the compensation sites.

5.4.3d Baseline Information

The final compensation plan(s) shall include descriptions of the ecological characteristics of the proposed compensation sites, impact sites, and any reference sites. This shall include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a delineation of waters of the state and U.S., a map showing the locations of the impact, mitigation, and reference sites, and other site characteristics appropriate to the types of resources proposed as compensation.

5.4.3e Compensation Ratios

The final compensation plan(s) shall specify the compensation ratios for all habitat types addressed in the plan(s) needed to achieve no net loss of habitat areas, functions, and services, and the rationale used to determine these ratios. Factors considered in determining mitigation ratios shall include:

- The likelihood of success;
- Differences between the habitat functions and services lost and those expected to be provided by the compensation;
- Temporal losses of resource functions and services;
- The difficulty of restoring or establishing the desired habitat types and functions; and
- The distances between the affected habitat and compensation sites.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.4.3f Mitigation Work Plan The final compensation plan(s) shall include detailed written specifications and work descriptions for the compensation projects, including, but not limited to: the geographic boundaries of the projects; construction methods; timing and sequence; sources of water, including connections to existing waters and uplands; soil properties (e.g., particle size, organic content); methods for establishing the desired plant communities; plans to control invasive plant and animal species; dewatering plans; proposed grading plans, including elevations and slopes of the substrate; soil management; and erosion control measures. For stream habitat compensation projects, the work plan shall also include: planform geometry; channel form (e.g., typical channel cross-sections and longitudinal profiles); stream type (i.e., ephemeral, intermittent, or perennial); location in watershed; watershed size (i.e., drainage area); mean annual precipitation; channel-forming discharge (i.e., design discharge); and riparian area plantings.
5.4.3g Maintenance Plan The final compensation plan(s) shall include a description and schedule of maintenance requirements to ensure the continued viability of the habitats once initial construction is completed.
5.4.3h Success Criteria The final compensation plan(s) shall include ecologically based criteria that will be used to determine whether the compensation projects are achieving their objectives. The success criteria shall be assessed by comparing performance during the monitoring period against objective and verifiable, ecologically-based success criteria which reflect the Goals and Objectives of the site. The type of language that will be included in the final MMPs under success criteria are described below. The final success criteria shall provide additional detail and specificity as needed to determine whether compensation objectives are achieved in accordance with resource agency permitting requirements. For example, these success criteria may include, but are not limited to these requirements: • Absolute vegetation cover of each established wetland feature shall comprise at least 70 percent by year 5. • Absolute cover of target invasive plant species shall not exceed 5 percent total cover by year 5. • Survival of planted oaks shall be at least 30 percent by year 10. • Planted vegetation will be fully established (i.e. not require irrigation and be self sustaining) at the end of the monitoring period.
5.4.3i Monitoring Plan The final compensation plan(s) shall include a description of parameters to be monitored to determine whether the compensation projects are on track to meet performance standards and whether adaptive management is needed. Suitable reference sites may be identified in which case the criteria used to select the reference sites shall be provided. Monitoring may include collaboration with relevant ongoing studies (e.g., Alameda Creek foothill yellow-legged frog and California red-legged frog monitoring by the East Bay Regional Parks District). A schedule for monitoring and reporting on monitoring results must be included.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.4.3j Long-term Management Plan The final compensation plan(s) shall include a description of how the compensation sites will be managed after the performance standards have been achieved to ensure the long-term sustainability of the resources, including long-term financing mechanisms and the party responsible for long-term management.
5.4.3k Adaptive Management Plan The final compensation plan(s) shall include a management strategy to address unforeseen changes in site conditions or other components of the compensation projects, including the party or parties responsible for implementing the adaptive management measures. The adaptive management plan will guide decisions for revising the final compensation plan(s) and implementing measures to address both foreseeable and unforeseen circumstances that adversely affect mitigation success. Adaptive management actions may include the purchase of mitigation credits from an approved mitigation bank.
5.4.3l Financial Assurances The final compensation plan(s) shall include a description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensation projects will be successfully completed in accordance with the performance standards.
5.5 Fisheries and Aquatic Habitat
5.5.1 Native Fish Capture and Relocation Prior to commencement of construction downstream of the existing dam, a qualified biologist shall capture and relocate native fish within the dam construction impact area and downstream approximately 100 feet. All captured native fish species shall be immediately released to a suitable habitat near the project site. The qualified biologist shall place nets with 1/8-inch mesh at the downstream extent to keep fish out of the area during fish removal activities. A small cofferdam shall be constructed at the lower end of the work
5.5.1 Native Fish Capture and Relocation (cont.) area, and the work area shall then be dewatered. Fish rescue and relocation shall continue until the area is completely dewatered, or until it is determined that no fishes remain in the dewatering area.
5.6 Hydrology
None required.
5.7 Water Quality
5.7.1 Storm Water Pollution Prevention Plan Consistent with the requirements of the State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ; adopted on September 2, 2009), the SFPUC shall undertake the proposed project in accordance with a project-specific SWPPP. The San Francisco Bay Regional Water Quality Control Board (RWQCB), the primary agency responsible for protecting water quality within the project area, is responsible for reviewing and ensuring compliance with the SWPPP. This review is based on the general permit issued by the State Water Resources Control Board.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.7.1 Storm Water Pollution Prevention Plan (continued)

The recommended Best Management Practices (BMPs), subject to review and approval by the RWQCB, include the measures listed below. However, the measures themselves may be altered, supplemented, or deleted during the RWQCB's review process, since the RWQCB has final authority over the terms of the SWPPP.

Scheduling

- Implement BMPs year-round during wet and dry weather.
- Include a wet-weather contingency plan stating which BMPs will be used.
- Include a schedule for BMP implementation that accounts for any time lag between initial application of certain BMPs (such as stabilizers, hydroseeding) and effective stabilization.
- Do not allow placement of fill or excavation in Borrow Area E from mid-December to mid-March, unless conditions are suitable (i.e., dry).
- Schedule and sequence construction activities to minimize the areal extent and duration of site disturbance at any time.

Preservation of Existing Vegetation

- Provide work exclusion zones outside of work areas to protect vegetation and to minimize the potential for removing or injuring trees, roots, vines, shrubs, and grasses.
- Avoid disturbance of riparian and wetland vegetation by installing flagging and temporary fencing.

Document the amount, type, and quality of removed wetland and riparian vegetation and its condition during the maintenance period and at the time of replanting.

- At the disturbed riparian and wetland sites, cover cleared areas with mulches or protective mats, install silt fences near remaining riparian areas and streams to control erosion and trap sediment, and reseed cleared areas with native vegetation.

Erosion and Sediment Controls

- Use berms, ditches, or other structures to divert natural surface runoff around construction areas.
- Install weed-free fiber rolls, straw-wattles, coir logs, silt fences, or other effective devices along drainage channels to prevent soils from moving into creeks.
- Install check dams, level spreaders, water bars, rock outlet protection for culverts, grade stabilization structures, or other devices to slow the velocity of stormwater runoff and reduce erosion potential.
- Install sediment control devices during construction, including but not limited to silt fences, check dams, ponds, and basins.
- Locate sediment traps to obtain the maximum storage benefit from the terrain, and to facilitate cleanout and disposal of the trapped sediment.
- Dispose of sediment removed from traps, ditches, and culverts in the spoils disposal sites.
- Maintain access roads throughout the construction period.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.7.1 Storm Water Pollution Prevention Plan (continued)

Erosion and Sediment Controls (continued)

- Stabilize temporary roads and construction entrances to minimize erosion and prevent mud and dirt from being tracked off site.
- Locate stockpiles at least 50 feet from creeks, drainage channels, and drainage swales, whenever possible.
- Install fiber rolls, straw-wattles or silt fencing between stockpiles and creeks, drainage channels, and drainage swales.
- Use silt fences or silt curtains when fill placement or excavation is adjacent to or in Calaveras Reservoir.

Slope Protection

- After excavating any open-cut slopes, install slope protection measures such as fiber rolls, drainage ditches, or erosion control fabrics to minimize the potential for concentrated surface runoff to cause erosion. (Not applicable to work at finished rock faces.)
- Stabilize vertical to nearly-vertical rock faces that are unable to support vegetation by cleaning the slopes of loose debris and benching them for stability.

Temporary Stream Crossings

- Construct temporary stream crossings using a temporary bridge with gravel approach ramps or temporary culverts backfilled with clean gravel/cobbles and topped with a gravel road base.
- Do not place earth and rockfill material in stream channels.
- Upon completion of the project, remove or stabilize temporary stream crossings with banks graded to a stable angle.

Wind Erosion Control

- Implement wind erosion or dust control procedures consisting of applying water or other dust palliatives as necessary to prevent or alleviate dust nuisance generated by construction activities. The contractor may choose to cover small stockpiles or areas as an alternative to applying water or other dust palliatives.
- Reduce wind speeds at the surface of soil stockpiles by erecting a windscreen or by changing the pile orientation or shape if covering piles is not practicable (i.e., when access to the pile is necessary).
- If runoff water could discharge to receiving waters, require that dust palliatives or tackifiers be ANSI/NSF 60–certified (Drinking Water Treatment Chemicals – Health Effects).
- Control water application rates to prevent runoff and ponding. Repair leaks from water trucks and equipment immediately.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.7.1 Storm Water Pollution Prevention Plan (continued)

Treatment Controls

- In order to meet the Basin Plan water quality objectives, install turbidity barriers and collect and treat drainage and runoff water from any part of the work area that has become turbid with eroded soil, silt, or clay to reduce turbidity prior to discharge to receiving waters.
- Use only certified ANSI/NSF 60 (Drinking Water Treatment Chemicals – Health Effects) coagulants or flocculants for treatment unless otherwise approved by the RWQCB. Review information on the effects of the coagulant or flocculant on aquatic life prior to selection.
- For naturally occurring asbestos (NOA)-containing areas, treatment may include coagulation/flocculation (if necessary), sedimentation, and filtration. For non-NOA/metals-containing areas, treatment may include only sedimentation.
- Prepare a dewatering plan prior to excavation.
- Impound dewatering discharges in sediment retention basins or other holding facilities to settle the solids and provide treatment prior to discharge to receiving waters as necessary to meet Basin Plan water quality objectives.
- Locate sediment retention basins a minimum of 50 feet from surface waters, creeks, drainage channels, and drainage swales, whenever possible.
- An off-site project may be required if an unusual storm event occurs and water discharges have not settled to avoid significant sedimentation from reaching Alameda Creek or its tributaries. All other mitigation measures to protect water quality from stormwater impacts would be implemented before the RWQCB would consider off-site mitigation. Off-site erosion control projects may include gully repairs, stream bank stabilization, slide repairs, or other actions acceptable to the RWQCB. The RWQCB may determine through the permitting process that an off-site erosion control project within the Alameda Watershed could be required to offset impacts on water quality. The RWQCB will determine appropriate drainage and runoff treatment controls as part of the SWPPP review and 401 Water Quality Certification permitting process.
- Off-site mitigation opportunities have been identified so that they can be implemented as quickly as possible in the event that an impact occurs. The off-site mitigation project for stormwater impacts, contingent upon a 10-year storm event resulting in the release of untreated water from runoff and dewatering activities, would be identified in coordination with the RWQCB. Examples of potential erosion and sediment management projects include funding identified Natural Resources Conservation Service proposed projects along Arroyo de la Laguna or implementing a mitigation site in the Sunol Valley, where several opportunities for erosion and sediment management have been identified. In the event that off-site stormwater control projects are implemented, impacts of off-site mitigation on water quality, sensitive wildlife, and archaeological resources will be minimized and avoided through implementation of Mitigation Measures 5.4.1, 5.4.2, 5.7.1, 5.10.2, and 5.10.5. Also, surveys for archaeological resources will be conducted prior to commencing work on the projects.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.7.1 Storm Water Pollution Prevention Plan (continued)

Hazardous Materials

- Keep hazardous materials and other wastes at least 100 feet from wetlands, creeks, drainage channels, and drainage swales, whenever possible.
- Store hazardous materials in areas protected from rain, and provide secondary containment to prevent leaks or spills from affecting water quality.
- Implement the following hazardous materials handling, storage, and spill response practices to reduce the possibility of adverse impacts from use or accidental spills or releases of contaminants:
  - Develop and implement strict on-site handling rules to keep construction and maintenance materials out of drainages and waterways.
  - Conduct all refueling and servicing of equipment with absorbent material or drip pans underneath to contain spilled fuel. Collect any fluid drained from machinery during servicing in leak-proof containers and deliver to an appropriate disposal or recycling facility.
  - Maintain controlled construction staging, site entrance, concrete washout, and fueling areas a minimum of 100 feet from stream channels or wetlands whenever possible to minimize accidental spills and runoff of contaminants in stormwater.
  - Prevent raw cement; concrete or concrete washings; asphalt, paint, or other coating material; oil or other petroleum products; or any other substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses.
  - Maintain spill cleanup equipment in proper working condition. Have spill kits and cleanup materials available at all locations of drilling and pile driving, as applicable. Clean up all spills immediately according to the spill prevention, control, and countermeasure plan, and immediately notify the CDFG and the RWQCB of any spills to waterways and cleanup procedures.
  - Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.
  - Keep vehicles and equipment clean; do not allow excessive build-up of oil and grease.
  - Inspect on-site vehicles and equipment daily at start-up for leaks, and repair any leaks immediately.

Hazardous Materials Handling Near Water (includes measures for barges, if selected)

- In the SWPPP, specify appropriate construction and material transportation and stockpiling practices to reduce the potential for discharging sediment and other construction materials into Calaveras Reservoir or for decreasing turbidity related to barging and the construction of temporary docking facilities (if used):
  - When not in use, store pile-driving equipment away from concentrated flows of stormwater, drainage courses, and inlets. Protect hammers and other hydraulic attachments from runon and runoff by placing them on plywood and covering them with plastic or a comparable material prior to the onset of rain.
  - Place drip pans under all vehicles and equipment on docks, barges, or other structures over water bodies when the vehicle or equipment is expected to be idle for more than 1 hour.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.7.1 Storm Water Pollution Prevention Plan (continued)

Hazardous Materials Handling Near Water (includes measures for barges, if selected) (continued)

  - Identify types of spill control measures to be employed, including the storage of materials and equipment. Ensure that staff is trained regarding the use of the materials, deployment and access of control measures, and reporting measures.
  - Use suction dredging, if feasible, to construct barge access channels.
  - Install a turbidity barrier around the work area during lane dredging and during the installation of jetties or docks and anchors.
  - Place dredged material directly into haul trucks that will dispose of the materials. Use lined haul trucks to prevent leaks or spills of sediment-laden water from dredged material. Do not allow temporary storage or dewatering of dredged spoils on site.
  - Test dredged materials during construction, and dispose of contaminated materials only at approved disposal facilities.
  - Establish and enforce barge and tugboat speeds and no-wake zones to decrease disturbance, erosional energy, and turbidity.
  - Maintain equipment that is stored or used in streambeds or on docks, barges, or other structures over water bodies to prevent leaks of oil, grease, fuel, coolants, and hydraulic fluids.
  - Secure all materials on the barge to prevent discharges to receiving waters via wind.
  - Install steel decking over the barge pontoons to minimize the potential for clay materials to fall into the reservoir during transport and loading.
  - Use sideboards to confine the clay materials on the barge and prevent the material from falling off the edge of the barge.
  - Perform loading and unloading of the barges within designated areas that are isolated from the rest of the reservoir by turbidity barriers.
  - Use barges / tug boats with dry exhaust systems and/or four-stroke engines to minimize combustion byproducts from entering the reservoir.

Sanitary and Greywater Waste Management

- Provide temporary sanitary facilities for construction workers that completely contain all sanitary and greywater waste produced at the construction site with the waste trucked to an appropriate disposal site.
- Locate facilities in convenient locations.
- Locate temporary sanitary facilities away from drainage facilities, watercourses, and traffic circulation.
- Secure temporary sanitary facilities to prevent overturning when subjected to high winds or risk of high winds.
- Use only reputable, licensed sanitary waste haulers.
- Maintain sanitary facilities in good working order and arrange regular collection to prevent overflows.
- Require regular maintenance of facilities and inspect facilities weekly during the rainy season and at two-week intervals in the non-rainy season to verify proper maintenance.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.7.1 Storm Water Pollution Prevention Plan (continued)

Solid Waste Management

- Specify solid waste management practices to prevent the discharge of pollutants to stormwater from solid waste.
- Select designated waste collection areas on site.
- Provide an adequate number of waste containers with lids or covers that can be placed over the container to keep rain out or to prevent the loss of wastes when it is windy.
- Arrange for regular waste collection before containers overflow, especially during rainy and windy conditions.

Equipment Maintenance

- Fuel, maintain, and park vehicles and equipment at least 100 feet from wetlands, creek channels, and drainage swales unless adequate measures have been taken to assure that petroleum products, hydraulic fluids, or other waste products are not discharged to wetlands, creeks, or storm drainage facilities. If dam foundation excavation operations, drilling and grouting operations, or barging require fueling or emergency maintenance activities near or on water bodies, the following measures will be taken to ensure that petroleum products, hydraulic fluids, or other waste products are not discharged to surface water or groundwater:
  - Check and maintain any equipment or vehicle driven and/or operated adjacent to a wetland or creek channel daily to prevent leaks.
  - If it is necessary for maintenance purposes to drain and replace fluids on site, collect the spent fluids using drip pans and drip cloths, store these items in separate labeled containers, and disposed of them properly (recycled when possible).
  - Provide secondary containment for fueling and maintenance to prevent leaks and spills from affecting water quality.

Equipment Washing

- Do not discharge water from equipment washing into drainages, or allow it to percolate into the ground.
- Wash equipment off site, except when on-site washing is required to reduce hazards associated with NOA. Prior to first use on the CDRP, equipment shall be washed to remove debris that could be a source of foreign contaminants such as non-native invasive plant seeds or propagules. If equipment must be washed on site, then only water may be used. Do not use soaps, solvents, degreasers, steam cleaning, or other similar products or methods unless all of the discharge is collected for appropriate off-site disposal.
- Wash equipment used in NOA-containing areas with water and brushes or a wheel wash system prior to entering non-NOA-containing areas, as required in the asbestos dust mitigation plan. Wheel wash systems will use water without solvents.
- After water from equipment or wheel washing has been treated with an oil/water separator and for turbidity/sediment removal, allow the water to be used for dust control or to percolate into the ground away from water bodies.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.7.1 Storm Water Pollution Prevention Plan (continued)

Material and Equipment over Water

- Use, store, and dispose of materials and equipment on barges, boats, temporary construction pads, or similar locations using appropriate procedures that minimize or eliminate the discharge of potential pollutants to a watercourse.

Material Delivery and Storage

- Prevent, reduce, or eliminate the discharge of pollutants from material delivery and storage to the stormwater system or watercourses by minimizing the storage of hazardous materials on site, storing materials in a designated area, installing secondary containment, conducting regular inspections, and training employees and subcontractors.

Post-Construction Site Restoration and Stabilization

- Upon project completion, return the project site to its general condition before construction, including re-grading the site and re-vegetating disturbed areas.
- Prepare and implement a detailed re-vegetation plan to ensure that appropriate plant cover (i.e., no invasive non-native plant species) becomes established in disturbed areas. This plan will identify measures to establish vegetation by planting, seeding, and irrigation, if necessary. The restoration plan will specify slope inclination and permanent drainage swales and berms to mitigate erosion of the disposal fills.
- Grade the final borrow area and disposal area slopes as flat as possible and bench them to control runoff. Upon completion of the project, remove all construction debris and associated materials from the work site.
- Inspect haul roads and staging areas for visible staining from spills or leaks of oil, grease, fuel, or other contaminants and remove any contaminated soils from inundation areas prior to refilling the reservoir.

Inspection and Maintenance

- Inspect all disturbed sites in the first week of October and no later than October 15 to document that all erosion and sediment control BMPs have been installed properly according to the BMP requirements.
- During the rainy season (October 15 through April 15), inspect all erosion and sediment control measures at least biweekly on sites with a low erosion hazard and weekly on slopes that are 15 percent or greater and in areas with highly erosive soils.
- After the first storm of record, inspect all erosion and sediment control measures daily, during and after each storm event.
- Repair breaches in erosion and sediment control devices at the close of each day and whenever rain is forecasted.
- Repair or replace erosion control devices after each rainstorm.
- Inspect sediment retention basins every working day.
- Stockpile at the site sufficient devices and materials (e.g., silt fencing, fiber rolls, straw bales, erosion mats, sand bags, gravel, plastic sheeting, soil tackifiers, flocculants, baker tanks, and pumps) to enable immediate repair or replacement of failed BMPs.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.7.1 Storm Water Pollution Prevention Plan (continued)

Inspection and Maintenance (continued)

- Immediately correct and report any failure, deficient performance, or improper installation of any control measures.
- Maintain access roads throughout the construction period.
- Regularly inspect all haul road surfaces to ensure that a gravel surface cover is maintained in good condition throughout the construction period. Immediately repair ruts, worn water bars and washed-out areas if identified.

Monitoring and Reporting

- For real-time information, use turbidity measurements during construction as a surrogate for asbestos measurements.
- Monitor turbidity downstream of the project to assess the effectiveness of control measures and protect water quality. Specify site-specific monitoring methods in the SWPPP.
- Treat all elevated levels of turbidity, asbestos, and metals to bring them within the established water quality standards in force at the time of occurrence.
- During construction, notify the RWQCB, Alameda County Water District, Alameda County Environmental Health Services Department, East Bay Regional Park District, and the Alameda County Flood Control and Water Conservation District in the event of elevated turbidity or a spill or release of contaminants, NOA, or metals to any waterways in the Alameda Creek system.

5.7.2 Drilling Fluids

If drilling muds/fluids are used for drilling operations, the SFPUC will ensure that drilling fluids contain only water and bentonite or similar inert substances (i.e., contain no environmental pollutants) and that any drilling fluids used are properly contained. If on-site containment and dewatering methods are used, the SFPUC and its contractors will ensure the contained materials are not susceptible to runoff during storms. Barriers (e.g., silt fence or berm) will be installed to prevent discharge of drilling fluids to receiving waters. Drilling fluids will be dewatered on site if approved by regulatory permitting agencies and/or properly disposed of off site.

The SFPUC or its contractor will prepare and implement a Drilling Contingency Plan to manage the inadvertent release, or "frac-out," of drilling fluids. If the contactor prepares the plan, it will be subject to approval by the SFPUC before drilling work can begin. The Drilling Contingency Plan will include measures to minimize the potential for a frac-out (e.g., pre-planning of the drilling profile based on ground conditions so that the potential for a release of fluids is minimized); provide for the timely detection of frac-outs; and ensure an organized, timely, and "minimum-impact" response in the event of a frac-out and release of drilling fluid.

Specifically, the Drilling Contingency Plan will require, at a minimum, the following measures and content:

- The contractor will provide a monitor on site during drilling operations to look for observable inadvertent releases or frac-out conditions or lowered pressure readings on drilling equipment that may indicate a potential frac-out.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.7.2 Drilling Fluids (continued)

- If the contractor and/or drill-rig operator suspects a frac-out (e.g., notices a loss of circulation of drilling fluid and cuttings do not show a large quantity of gravel) or drilling fluid is observed at the surface, the contractor will implement measures to stop the frac-out, such as reducing the drilling pressure or thickening the drilling fluid (e.g., by using less water). If measures to stop frac-out are not successful, all drilling work will stop, including the recycling of drilling fluid, until the location and extent of the frac-out can be determined and remedied.
- If the drilling fluid does not surface, no other actions will be taken.
- If the drilling fluid surfaces, the affected area will be surrounded with a barrier (e.g., berm and/or silt fence) to prevent discharge of the fluid to surface waters. If the drilling fluid is released into surface waters and there is a visible plume, a sediment boom or curtain will be installed downstream of the frac-out to attempt to capture the released drilling fluid. The drilling fluid will then be removed using the minimum amount of equipment needed (e.g., manually or by suction hose using a vacuum truck) in order to minimize impacts on the surface area where the frac-out occurred.
- If the response measures described above contain the frac-out, drilling may resume.
- The SFPUC will ensure that the Drilling Contingency Plan also includes procedures for notification of and reporting of frac-outs to applicable regulatory agencies (i.e., Regional Water Quality Control Board, Alameda County Water District).

5.8 Geology, Soils, and Seismicity

5.8.3 Geotechnical Evaluation for Disposal Site Stabilization

A geotechnical evaluation shall be completed for reserve Disposal Site 5 if the fill placement creates final slopes greater than 20 feet high. The analysis shall address static stability, hazards from fault offset, drainage, erosion control, and grading requirements. The investigation and analysis shall be coordinated with the civil engineering design of the disposal site and shall be completed under the direction and oversight of a California-licensed Geotechnical Engineer. The geotechnical investigation report shall be reviewed and approved by SFPUC Engineering Management Bureau. All measures specified for design and construction of the fills shall be implemented by the construction contractor.

5.9 Hazards and Hazardous Materials

5.9.1 Groundwater at Former Calaveras Test Site

The SFPUC shall notify the San Francisco Bay RWQCB of planned excavation activities in the vicinity of the former Calaveras Test Site and shall implement the monitoring requirements specified by the RWQCB to demonstrate that excavation activities in Borrow Area E do not adversely affect the groundwater plume at the former Calaveras Test Site and to detect the presence of previously unidentified soil or groundwater contamination, if encountered. The monitoring requirements and potential response actions, should monitoring identify effects on the groundwater plume or previously unidentified contamination, shall be specified in a contingency plan prepared by the construction contractor for review by the SFPUC. The contingency plan shall identify potential response actions, such as segregation, testing, and treatment of affected soil and groundwater.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.9.2a Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program

The SFPUC shall prepare an Asbestos Dust Mitigation Plan for approval by Bay Area Air Quality Management District (BAAQMD) as required in Section 93105 of Title 17 of the California Code of Regulations, "Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations." The SFPUC shall also prepare a Comprehensive Air Monitoring Program that shall be submitted for review by the BAAQMD. The Asbestos Dust Mitigation Plan shall specify site-specific measures that will be implemented to minimize emissions of naturally occurring asbestos (NOA) and metals-containing dust. Risk-based trigger levels will be utilized during construction to evaluate whether additional dust control measures are required so that the project does not cause unacceptable off-site exposure to airborne asbestos and metals (including chromium, nickel, arsenic, copper, and cobalt). Off-site exposure will be evaluated for receptors that are located beyond the control boundary, which in turn, entirely encompasses the work area boundary of the project[8]. The SFPUC shall include all applicable measures set forth in the Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program in the construction contract for the project.

The SFPUC shall also engage a third party consultant that would provide review and monitoring of the construction contractor's air monitoring activities, other related construction contractor worker protection measures, and the construction contractor's NOA soil and rock evaluations for compliance with contract requirements. The consultant shall also conduct the comprehensive air monitoring required by the Comprehensive Air Monitoring Program (described below). The third party consultant shall be qualified in ambient air monitoring under the supervision of a Certified Industrial Hygienist who is also a California Certified Asbestos Consultant or who has current 40-hour AHERA training.

Examples of dust control measures that may be implemented include the measures identified in the Asbestos Airborne Toxics Control Measure (ATCM) and the 2010 BAAQMD California Environmental Quality Act Air Quality Guidelines, as well as project-specific measures to be included in the Asbestos Dust Mitigation Plan. As provided for in the Asbestos ATCM, alternative measures that provide an equivalent level of dust control may be included in the Asbestos Dust Mitigation Plan subject to BAAQMD authorization. The Asbestos ATCM and the BAQQMD Air Quality Guidelines include the following dust control measures applicable to construction activities in NOA containing areas:

- Restriction of vehicle speeds on on-site unpaved roads, staging areas, and parking lots to 15 miles per hour; as well as wetting, use of a chemical dust suppressant, or use of a gravel cover containing less than 0.25 percent asbestos or other effective measures in these areas to control dust generation;
- Wetting all exposed surfaces at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe;
- Wetting of work surfaces prior to and during construction activities and suspension of grading operations when wind speeds are high enough to result in visible dust emissions crossing the work area boundary that would incorporate all active work areas;
- Suspension of all excavation, grading, and/or demolition activities when average wind speeds exceed 20 mph;
- Wetting or use of a cover to control dust from active storage piles;

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.9.2a Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program (continued) • Wetting, use of a chemical dust suppressant, use of a cover (such as a tarp or vegetative cover), establishment of a surface crusting, use of wind barriers or other effective measures to control dust from inactive storage piles and inactive work areas; • Removal of all visible mud or dirt track-out onto adjacent public roads using wet power vacuum street sweepers at least once per work day. The use of dry power sweeping is prohibited; • Implementation of track-out prevention measures such as a gravel pad, wheel wash system, use of a paved approach, or other equally effective measures to prevent and control track-out to a public road; • Loading of trucks for transport of NOA-containing materials outside the work area boundary such that no spillage could occur, as well as wetting the load and either covering it with a tarp or loading the truck such that material does not touch the front, back, or sides of the cargo compartment at any point less than 6 inches from the top and that no point in the load extends above the top of the cargo compartment (note that this measure is included for completeness to be consistent with the Asbestos ATCM, but would not be required for the proposed project because no NOA-containing materials would be transported outside the work area boundary as part of the project); • Limiting the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time. Activities shall be phased to reduce the amount of disturbed surfaces at any one time; • Paving all roadways, driveways, and sidewalks planned for paving as soon as possible after the start of construction; • Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used; • Washing all trucks and equipment, including tires, such that they shall be free of NOA, prior to leaving the site; • Post-construction stabilization of disturbed areas with vegetative ground cover (fast-germinating native grass seed), placement of at least 3 inches of non-asbestos containing material, paving, or any other measure deemed sufficient as soon as possible and water appropriately until vegetation is established; • Treating site accesses to a distance of 100 feet from the paved road with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel; • Posting a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations; and • Restricting blasting activities in areas of NOA and metals to daylight hours Monday through Friday and when average wind speeds are 20 miles per hour or less.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.9.2a Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program (continued)

- If needed for adequate dust control, the Asbestos Dust Mitigation Plan shall also include additional project-specific dust control actions (enhanced measures) for general construction activities, drilling, blasting, rock processing, tunneling, and dam foundation cleaning activities to prevent visible dust from migrating beyond the work area boundaries. Enhanced measures would also be implemented if daily air monitoring detects an exceedance of the established trigger levels at a perimeter monitoring location. Examples of possible actions include:
- Increased frequency of sweeping all paved access roads, parking areas, and staging areas daily;
- Reducing wind speeds to soil surfaces (by using a wind screen or changing the shape or orientation of the stockpile) to control dust from active storage piles;
- Drilling with water in NOA-containing areas;
- Wetting blast areas as feasible, before, during, and after the blast;
- Using blasting blankets as feasible;
- Continuous misting or using an equivalent water application technique during the cleaning of the dam foundation and processing of earth and rockfill materials for the new embankment where NOA- and metals-containing rock is present;
- Wetting the adit and shaft work surfaces and materials when tunneling in NOA and metals-containing rock, as well as materials derived from these activities;
- Prohibiting the use of compressed air for drilling and foundation cleaning and the use of jack hammers for any activities disturbing NOA-containing rocks unless measures are implemented to capture or control airborne dust generated by the process;
- Applying water whenever NOA-containing materials are being removed from the tunnel or adits by mechanical processes such as shovels, excavator buckets, and hydraulic breakers; and/or
- Using a treatment system such as a baghouse or HEPA-type filtering device to remove NOA-containing dust from the tunnel exhaust air.

The measures in the Asbestos Dust Mitigation Plan may be altered, supplemented, or replaced during the BAAQMD's review process, since the BAAQMD has final authority over the terms of the Asbestos Dust Mitigation Plan.

The SFPUC shall prepare and implement a Comprehensive Air Monitoring Program that will describe monitoring that will be conducted to demonstrate compliance with the Asbestos ATCM. The plan will specify three types of daily monitoring: 1) air monitoring to be conducted at the perimeter monitoring locations (locations along or within the control boundary; and 2) construction activity area monitoring of specific construction activities within the work area boundary to provide an added level of analysis and control of dust generation during construction; and 3) ambient air monitoring at locations in the vicinity of the project and Sunol Regional Wilderness Area that are outside the control boundary. Monitoring of construction activities will provide information to demonstrate whether the generation of dust, asbestos and metals is being effectively controlled at the source, before it reaches the work area boundary. Perimeter monitoring locations will be selected within or at the control boundary to detect dust, asbestos, and metals for comparison with

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.9.2a Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program (continued) the trigger levels identified in the Comprehensive Air Monitoring Program. In addition, monitoring will include continuous collection of meteorological data on wind speed and direction in the project area. The Comprehensive Air Monitoring Program shall specify the location(s) and frequency of perimeter monitoring, and risk-based trigger levels of asbestos and metals (including chromium, nickel, arsenic, copper, and cobalt) that would be protective of off-site receptors (e.g., recreational users of Calaveras Road and/or nearby trails in the Sunol Regional Wilderness area, as well as visitors, residents, and park employees). The Comprehensive Air Monitoring Program shall also specify corrective actions to be taken should the trigger level of asbestos or metals be exceeded at any monitoring locations. If trigger levels are exceeded at a perimeter monitoring location, the SFPUC shall notify Alameda County, East Bay Regional Parks District, and other applicable entities, investigate the cause of the exceedance, and implement corrective actions such as implementation of enhanced dust suppression techniques. Should corrective action fail to bring asbestos or metals concentrations to within risk-based limits, the Comprehensive Air Monitoring Program will require the contractor to modify or temporarily halt construction activities in areas generating excessive dust until dust generation could be maintained within trigger levels. Should trigger levels be exceeded in the tunnel emissions, the SFPUC shall investigate the cause of the exceedance, and implement corrective actions such as implementation of enhanced dust suppression techniques or additional emission controls. Should corrective action fail to bring asbestos concentrations to within risk-based trigger limits, the Comprehensive Air Monitoring Program shall require the contractor to reduce or stop tunneling in areas generating excessive dust until dust generation could be maintained within trigger limits. The Asbestos Dust Mitigation Plan shall be subject to review and approval by the BAAQMD prior to the start of construction. The Comprehensive Air Monitoring Program shall be reviewed by the BAAQMD prior to the start of construction. [8] The "work area boundary" is defined as the limits of the active work areas of the project, within which soil and rock will be disturbed during construction; construction activity area monitoring locations will be within the work area boundary. The "control boundary" will be identified under the Comprehensive Air Monitoring Program and will encompass the work area boundaries and lie entirely within the CCSF-owned property boundary; perimeter monitoring locations will be located along or within the control boundary.
5.9.2b Construction Worker Protection The construction contractor shall implement the asbestos monitoring provisions specified in California Code of Regulations Title 8, Section 1529 (8 CCR 1529), Construction Safety Orders, Asbestos, regulated by the California Division of Occupational Safety and Health (Cal/OSHA), and shall include those provisions in accord with Cal/OSHA for the CDRP to provide additional worker protection measures. These additional measures would be included as additional contract requirements in the construction contract and would be subject to review and monitoring of the SFPUC's third party consultant identified under Mitigation Measure 5.9.2a. Additional measures include, but are not limited to, the following items: • The construction contractor shall provide a Certified Industrial Hygienist who is also a Certified Asbestos Consultant who would be responsible for all aspects of design and implementation of its Personal Air Monitoring program. Contractor personnel will also be Certified Asbestos

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.9.2b Construction Worker Protection (continued) Consultant s or Site Surveillance Technicians under the supervision of a Certified Asbestos Consultant. The construction contractor will implement focused site-specific training under Certified Industrial Hygienist supervision. • The construction contractor shall provide a California Professional Geologist who oversees all determinations of lithological changes during construction. • The construction contractor shall perform extended initial exposure assessments in a manner that would evaluate both work activities and area specific lithological effects on a regular and frequent basis, including of evaluation of potential exposure on adjacent work areas. The results of these evaluations will be immediately provided to the City's third party consultant. • During construction, workers will be required to implement additional engineering controls and don personal protective equipment for worker respiratory protection based on the results of the extended initial exposure assessments. The trigger level for implementing these additional measures would be set at 10 percent of the Cal/OSHA permissible exposure limit as feasible based on actual field conditions and sample loading. The laboratory analytical method shall be phase contrast microscopy as verified by transmission electron microscopy by NIOSH 7402. • The contractor shall be responsible to inform workers when to don respirators based on air quality monitoring data collected by the contractor. In addition, the contractor shall be required to provide the SFPUC's third party consultant with the same air quality monitoring data. The third party consultant will notify the SFPUC immediately when their review of the contractor's data indicates that the contractor employees should don respirators in any given area of the project, and when their review of the contractor's data indicates that the contractor should reinitiate exposure assessment activities. • The construction contractor shall provide for decontamination (showers, changing areas, disposal of personal protective equipment) for all personnel who have potential for exposure to NOA in excess of 10 percent of the permissible exposure limit prior to leaving the work place in accordance with a Decontamination and Hygiene Facilities Plan reviewed by the City's third party consultant. The plan would specify requirements for decontamination stations, and would also address truck washing, provide for HEPA vacuuming stations, and provide for interim decontamination stations that are easily accessible to personnel to provide worker protective clothing and equipment during work shifts. • Signs shall be posted at the entrances to work areas where activities that disturb NOA would occur and along the road to indicate where NOA-containing materials are known to be present or handled.
5.9.2c Watershed Keeper's Residence The SFPUC shall require the construction contractor to protect the watershed keeper's residence from NOA and metals-laden dust through the use of barriers or equivalent containment throughout the construction period. The acceptable residual level of asbestos and naturally occurring metals in the residence shall be specified in the Comprehensive Air Monitoring Plan prepared in accordance with Mitigation Measure 5.9.2a, and the SFPUC shall conduct clearance sampling to demonstrate compliance with these standards, and clean the residence to the specified standard if standards are not met upon first sampling.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.9.2d Excavation Materials Management Plan

To assist in the management and placement of the surplus rock and soil, the SFPUC shall prepare an Excavated Materials Management Plan for the approval of the RWQCB specifying how excavated rock will be properly classified and managed during construction. The contractor shall be required to segregate materials derived from the Franciscan Complex serpentinite and mélange from other materials for separate hauling, stockpiling and final disposition in the on-site disposal areas.

5.9.5 Hazardous Materials in Structures to be Demolished

Any electrical equipment containing polychlorinated biphenyls (PCBs), fluorescent lights containing mercury vapors or fluorescent light ballasts containing PCBs or Bis(2-ethylhexyl)phthalate (DEHP) in any of the structures to be demolished shall be removed and legally disposed of at a permitted off-site facility.

5.10 Cultural Resources

5.10.1 Archaeological Evaluation and Monitoring, and Treatment of Human Remains

All archaeological documentation required by this mitigation measure shall be consistent with the format and protocols of the San Francisco Planning Department Major Environmental Analysis Division (MEA) Water System Improvement Program (WSIP) Archaeological Guidance, and shall be reviewed and approved by the MEA Archaeologist or Designee. For those projects that require a federal permit and compliance with the National Historic Preservation Act (NHPA), Section 106, the Environmental Review Officer (ERO) will review the State Historic Preservation Officer (SHPO) approved requirements in the permit conditions and consider protective approaches that limit undue duplication of efforts.

Based on the findings of the project's Historic Context and Archaeological Survey Report (HCASR) or equivalent analysis in an ASR and Historic Resources Inventory and Evaluation Report (HRIER) and the determination of the MEA Archaeologist or Designee, the SFPUC shall retain the services of a qualified archaeologist (i.e., an archaeologist who meets the professional qualifications standards of the Secretary of the Interior) to undertake the archaeological investigations described below.

Archaeological Monitoring Plan

The archaeologist shall prepare an Archaeological Monitoring Plan (AMP) consistent with the protocols of the MEA WSIP Archaeological Guidance. The purpose of the AMP will be to ensure that important, previously unrecorded archaeological resources that are discovered during construction are identified, evaluated, and treated appropriately. The AMP will implement Archaeological Measure 5.10.2, below.

Archaeological Evaluation Plan

The archaeologist shall prepare an Archaeological Evaluation Plan (AEP) consistent with the protocols of the MEA WSIP Archaeological Guidance. The AEP will create a program to determine the potential of the expected resource to meet the CRHR criteria–particularly Criterion 4, the resource's potential to address important research questions identified in the AEP–and the archaeologist shall submit this plan to the ERO for approval. The archaeologist shall then conduct an evaluation consistent with the ERO-approved AEP. The methods and findings of the evaluation shall be presented in an Archaeological Evaluation and Effects Report (AEER), which shall be submitted to the ERO upon completion.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.10.1 Archaeological Evaluation and Monitoring, and Treatment of Human Remains (continued)

Archaeological Data Recovery and Treatment Plan

Based on the conclusions of the AEER, the MEA Archaeologist or Designee shall determine if the project will adversely affect a California Environmental Quality Act (CEQA)-significant archaeological resource. If the project will have an adverse effect on such a resource, an Archaeological Research Design and Treatment Plan (ARDTP) shall be prepared by the archaeologist and submitted to the ERO. Once approved by the ERO, a data-recovery investigation and/or other treatment, consistent with the ARDTP, shall be conducted by the archaeologist.

Human Remains and Associated or Unassociated Funerary Objects

The treatment of human remains and of associated or unassociated funerary objects discovered during any soil-disturbing activity shall comply with applicable State laws. This shall include immediate notification of the coroner of the county within which the project is located and, in the event of the coroner's determination that the human remains are Native American, notification of the California State Native American Heritage Commission (NAHC), who shall appoint a Most Likely Descendant (MLD) (PRC Section 5097.98). The archaeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (State CEQA Guidelines Section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. California Public Resources Code allows 24 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the Project will follow Section 5097.98(b) of the California Public Resources Code, which states that "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

Archaeological Data Recovery Report

The archaeologist shall submit a draft Archaeological Data Recovery Report (ADRR) to the ERO that describes the archaeological and historical research methods employed in the archaeological evaluation/monitoring/data recovery program(s) undertaken, and presents, analyses, and interprets the recovered data. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report. Once approved by the ERO, copies of the ADRR shall be distributed as follows: the relevant California Historical Resources Information System Information Center shall receive one copy and the ERO shall receive a copy of the transmittal of the ADRR to the Information Center. MEA shall receive three copies of the ADRR, along with copies of any formal site recordation forms (California Department of Parks and Recreation (CA DPR) 523 series) and/or documentation for evaluation under NRHP/CRHP criteria. In instances of high public interest or high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

5.10.2 Archaeological Measure II: Accidental Discovery Measures

SFPUC Construction Measure #9 for cultural resources requires that construction activities be suspended immediately if there is any indication of an archaeological resource.

To avoid any potentially significant adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in State CEQA Guidelines Section 15064.5(a)(c), the project sponsor shall distribute the Planning Department's

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.10.2 Archaeological Measure II: Accidental Discovery Measures (continued)

archaeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor firms (including demolition, excavation, grading, foundation, pile driving); and/or to utilities firm involved in soil-disturbing activities within the project site. Prior to any soils-disturbing activities being undertaken, each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel, such as machine operators, field crew, pile drivers, and supervisory personnel. The project sponsor shall provide the ERO with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel have received copies of the "ALERT" sheet.

Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the SFPUC shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archaeological resource may be present within the project site, the project sponsor shall retain the services of a qualified archaeological consultant. The archaeological consultant shall advise the ERO as to whether the discovery is an archaeological resource that retains sufficient integrity and is of potential scientific/historical/cultural significance. If an archaeological resource is present, the archaeological consultant shall identify and evaluate the archaeological resource. The archaeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by the project sponsor.

Measures might include: preservation in situ of the archaeological resource; an archaeological monitoring program; or an archaeological evaluation program. If an archaeological monitoring program or archaeological testing program is required, it shall be consistent with this measure. The ERO may also require that the project sponsor immediately implement a site security program if the archaeological resource is at risk from vandalism, looting, or other damaging actions.

The project archaeological consultant shall submit an accidental discovery ADRR to the ERO which, in addition to the usual contents of the ADRR, includes an evaluation of the historical significance of any discovered archaeological resource, as well as describing the archaeological and historical research methods employed in the archaeological monitoring/data recovery program(s) undertaken, and presenting, analyzing, and interpreting the recovered data. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the ADRR shall be distributed as follows: the relevant California Historical Resources Information System Information Center shall receive one copy and the ERO shall receive a copy of the transmittal letter of the ADRR to the Information Center. The MEA shall receive three copies of the ADRR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. The SFPUC shall receive copies of the ADRR in the number requested. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.10.5 Paleontological Resources

Paleontological Resources Training

Prior to the initiation of any site preparation or start of construction, the SFPUC shall ensure that all construction forepersons and field supervisors receive training overseen by a qualified professional paleontologist or a California Registered Professional Geologist (California RPG) with appropriate paleontological expertise, as defined by the Society of Vertebrate Paleontology's Conformable Impact Mitigation Guidelines Committee (SVP 1995 Guidelines), who is experienced in teaching non-specialists, to ensure that forepersons and field supervisors can recognize fossil materials in the event that any are discovered during construction. Training on paleontological resources shall also be provided to all other construction workers, but may include videotape of the initial training and/or the use of written materials rather than in-person training by a paleontologist. Training shall include an explanation of which portions of the project (i.e., excavation for the Left Abutment Core and Shell Foundation Trench; Right Dam Abutment; Stilling Basin cut slope, above an elevation of approximately 780 feet; Spillway Discharge Channel; the top formation of Borrow Area B, above elevation of approximately 780 feet; Borrow Area E/Disposal Site 5; Staging Areas 5, 7, and 8; and Electrical Distribution Line Upgrade) that possess a high sensitivity for potential paleontological resources.

Pre-Construction assessment, resource avoidance and/or salvage, and construction monitoring for paleontological resources

Pre-construction assessment, resource avoidance and/or salvage, and construction monitoring for paleontological resources within excavation for the Left Abutment Core and Shell Foundation Trench; Right Dam Abutment; Stilling Basin, above an elevation of approximately 780 feet; Spillway Discharge Channel; the top formation of Borrow Area B, above an elevation of approximately 780 feet; Borrow Area E/Disposal Site 5; Staging Areas 5, 7, and 8; and Electrical Distribution Line Upgrade which would be constructed partially or wholly in geologic units with a high potential for paleontological resources.

Prior to construction, the SFPUC shall implement the following:

- A literature review shall be conducted by a California RPG with appropriate paleontological expertise or a qualified professional paleontologist, as defined by the SVP 1995 Guidelines to ensure the geologist/paleontologist is familiar with previous documentation prepared for the project, and the latest data on fossil localities within the formations in the project region. '
- A reconnaissance-level field assessment of the highly sensitive areas where ground disturbance (grading or excavation activities) shall be conducted. The field assessment shall be limited to identifying potentially significant features at the surface. In areas of thick ground cover, this assessment may need to be conducted after vegetation clearing.
- The results of the field assessment shall be documented in a technical memorandum to be submitted for review and approval by the ERO or designee prior to the start of construction, which shall include recommendations for appropriate and feasible procedures to avoid or minimize damage to any paleontological resources expected to be present. The memorandum shall also make recommendations regarding the need, if any, for paleontological monitoring of ground-disturbing activities. In the event that the memorandum identifies recommendations for monitoring, it shall include information on where, when, and how this monitoring shall be conducted. The ERO or designee shall review and approve the memorandum in consultation with the SFPUC.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.10.5 Paleontological Resources (continued)

- If the evaluation and field assessment result in the discovery of a paleontological resource exposed at the surface, or confirm the potential for impacts on significant paleontological resources, then avoidance and/or salvage and monitoring shall also be implemented as described below.

If a significant paleontological resource is discovered at the ground surface as a result of the preconstruction assessment and cannot be avoided through exclusion of the area from project disturbance (e.g., through a project change or the installation of exclusion fencing), the SFPUC shall retain a qualified professional paleontologist to salvage and treat the resource prior to construction activity in the immediate vicinity of the find. Salvage of the resource shall include recovering the item and properly documenting, preparing, and curating the find. Recommendations for any treatment that is required will be consistent with SVP 1995 Guidelines and currently accepted scientific practice. If required, treatment of the resource may include preparation and recovery of fossil materials for housing in an appropriate museum or university collection, and may also include preparation of a report for publication describing the find. If no report is required, the SFPUC will ensure that information on the nature, location, and depth of all finds is available to the scientific community through university curation or other appropriate means. No construction activities at the location of the find shall be allowed until the salvage operation is completed and authorization is provided by the ERO or designee.

If determined necessary by the ERO or designee after review of the preconstruction assessment memorandum, a qualified professional paleontologist, as defined by the SVP 1995 Guidelines, shall conduct periodic monitoring during ground disturbing activities (e.g., grading and excavation) at sites where paleontological resources are confirmed or likely to be present (i.e., within the Briones, Orinda, or Claremont Formations; Temblor Sandstone; Older Alluvium; or colluvium or landslide deposits derived from these units formations). The paleontologist shall also be retained on-call by the SFPUC and its contractor throughout ground-disturbing activities.

Paleontological monitoring, if required, will consist of periodically inspecting disturbed, graded, and excavated areas. The monitor will have authority to divert grading or excavation away from exposed areas temporarily in order to examine disturbed areas more closely, and/or recover fossils. The monitor will coordinate with the construction manager so that monitoring is thorough but does not result in unnecessary delays.

If potential fossils are discovered during construction, all earthwork or other types of ground-disturbance within 50 feet of the find shall stop immediately until a qualified professional paleontologist, as defined by the SVP 1995 Guidelines, can assess the nature and importance of the find and recommend appropriate salvage and treatment (as described above). Once the monitor has assessed the find, the monitor may propose modifications to the stop-work radius based on the nature of the find, site geology, and the activities occurring on the site. The monitor's recommendations shall be subject to review and approval by the ERO or designee. The SFPUC shall be responsible for ensuring that the recommendations of the paleontological monitor regarding treatment and reporting are implemented and reported to the San Francisco Planning Department.

5.11 Visual Resources

None required.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.12 Transportation and Circulation

5.12.4a Traffic Control Plan

The SFPUC or its contractor(s) shall prepare and implement a Traffic Control Plan. To the extent applicable, the Traffic Control Plan should conform to the state's Manual of Traffic Controls for Construction and Maintenance Work Areas. As applicable, elements of the Traffic Control Plan should be coordinated with applicable agencies and include, but are not necessarily limited to, the following:

- SFPUC and its contractors shall coordinate individual traffic control plans for SFPUC projects in the Sunol Valley.
- Advance warning signs shall be installed on Calaveras Road north of Geary Road and on Felter Road and East Calaveras Road south of the dam advising motorists of the construction zone ahead to minimize hazards associated with potential conflict with construction vehicles and to notify motorists of weekday closure of Calaveras Road between Geary Road and Felter Road.

  The SFPUC shall develop a program to notify the potential users (including drivers, bicyclists, and pedestrians) of Calaveras Road between Geary Road and Felter Road of the schedule of roadway closures, detour route for vehicles, and alternate recreational bicycle routes. The SFPUC shall disseminate this information by posting signs along Calaveras Road north and south of the dam, providing up to date details to the East Bay Regional Park District, Alameda County and Santa Clara County, and posting this information on a project website or other easily-accessible media.
- Either flaggers, illuminated signs, a temporary stoplight, a flashing yellow light, or a combination of these methods shall be utilized to slow approaching traffic at project access points on Calaveras Road at Geary Road and at Felter Road.
- Locations shall be identified for parking by construction workers within the established work area.
- Construction shall be coordinated with police and fire, local hospitals, and schools. Operators shall be notified in advance of the timing, location, and duration of construction activities and the location of detours and roadway closures.
- Public roadway rights-of-way shall be repaired or restored to their pre-construction conditions upon completion of construction. The SFPUC shall inspect and document the condition of Calaveras Road prior to and after completion of the project and, if roadway damage is detected, enter into an agreement with Alameda and Santa Clara Counties of the City of Milpitas, if applicable, for implementing a post-construction roadway repair/rehabilitation program. At a minimum, roads damaged by the project shall be repaired to a structural condition equal to that which existed prior to the project construction activities at no expense to Alameda or Santa Clara Counties, or the City of Milpitas. Maintenance of adequate driving and bicycling conditions of Calaveras Road during the construction period shall also be addressed.
- To the extent applicable, the traffic control plan shall conform to the California Manual on Uniform Traffic Control Devices for Streets and Highway: Part 6 Temporary Traffic Control (Caltrans 2006).
- If applicable, the construction contractor shall obtain a truck haul permit related to construction vehicle travel through the City of Milpitas.
- The closed portion of Calaveras Road between Geary Road and Felter Road shall be swept clean before 6:00 am Saturday morning, and re-opened to traffic on Saturday and Sunday.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.12.4b Approval for Road Closures

The SFPUC shall seek approval from Alameda County for closure of Calaveras Road between Geary Road and the dam site, to through traffic, Monday to Friday, except for emergency vehicles, during 2 periods when hauling on Calaveras Road from Geary Road to the dam site would create substantial conflicts with other vehicles. These two periods are estimated to occur for 2 months in summer 2011 and 18 months beginning in winter 2012. The SFPUC shall also seek approval from Santa Clara County for either (1) closure of the Calaveras Road between the dam site and Felter Road, to through traffic, Monday to Friday, except emergency vehicles, to avoid creating a 7-mile long dead-end with no outlet, or (2) constructing a turnaround at the dam site and installing signage at Felter Road advising of no outlet 7-miles up the road due to construction for the same 2 periods.

5.13 Air Quality

The following BAAQMD-recommended mitigation measures may be altered, supplemented, or deleted as determined appropriate by BAAQMD to meet the BAAQMD-enforced performance standard for emissions of air contaminants during BAAQMD's permit review process, since the BAAQMD has final authority over the terms of the Authority to Construct Permit for the proposed project as described in EIR Section 3.7.3, Agency Approvals (p. 3-74).

5.13.1a Fugitive dust mitigation measures recommended by the Bay Area Air Quality Management District

The SFPUC shall implement the BAAQMD-recommended mitigation measures, where required, to reduce emissions of fugitive dust (particulate matter, or PM_{10}) from construction activities, including the following:

- Water all exposed surfaces (e.g. active construction areas) at least twice daily.
- Cover all haul trucks transporting soil, sand, and other loose materials off-site.
- Pave applicable road surfaces as soon as possible and lay any building pads as soon as possible after grading unless seeding or soil binders are used.
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.
- Sweep track-out from streets at least daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more).
- Enclose, cover, water twice daily, *or* apply (nontoxic) soil binders to exposed stockpiles (dirt, sand).
- Limit traffic speeds on unpaved roads[9] to 15 miles per hour.
- Post publicly visible signage with the telephone number and person to contact at the SFPUC regarding dust complaints. This person, or project liaison, shall respond and take corrective action within 48 hours. The phone number of the BAAQMD shall also be visible to ensure compliance with applicable regulations.
- Replant vegetation in disturbed areas as quickly as possible.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.13.1a Fugitive dust mitigation measures recommended by the Bay Area Air Quality Management District (continued)

- These fugitive dust mitigation measures work in combination with and will be implemented in addition to dust control measures in Mitigation Measure 5.9.2a – Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program.

[9] The West Haul Road will be developed with clean gravel and watered at least twice daily to avoid generation of fugitive dust; where visible dust is generated, additional water will be applied to the haul road or vehicle speeds will be limited to 15 miles per hour. Additional dust and vehicle speed limits presented in Mitigation Measure 5.9.2a.

5.13.1b BAAQMD-recommended exhaust emissions mitigation measures

The SFPUC shall implement the following BAAQMD-recommended mitigation measures to reduce exhaust emissions of reactive organic gases, nitrogen oxides, and PM_{10} from construction activities:

- Use grid power instead of diesel generators at all construction sites where it is feasible to connect to grid power.
- In contract specifications, include California Code of Regulations, Title 13, Section 2485, which limits the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds), with supplemental idling restrictions of two minutes for diesel powered construction equipment per BAAQMD exhaust control measures. Clear signage indicating idling limits shall be provided for construction workers at all access points. This requirement shall also apply to barges in the event that Haul Option 2 is selected. ’
- Minimize idling time to a maximum of 5 minutes for all non-construction diesel vehicles and equipment.
- Locate staging areas and equipment maintenance activities as far from sensitive receptors as possible.
- A plan shall be developed and implemented demonstrating that the off-road equipment (more than 50 horsepower) to be used for construction (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
- Develop a schedule of low-emissions tune-ups and perform such tune-ups on all equipment. A log of required tune-ups shall be maintained and a copy of the log submitted to the SFPUC on a monthly basis for review. In addition, all equipment shall be maintained in good working order and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to initial operation at the project site.
- All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.13.3a Diesel Particulate Matter Reduction - Off-road Equipment The SFPUC shall ensure that construction-contract specifications include a requirement that all off-road diesel construction equipment is equipped with U.S. Environmental Protection Agency Tier 2 diesel engines as defined in U.S. Code of Federal Regulations, Title 40, Part 89 and are equipped with California Air Resources Board Level 3 Diesel Emission Control Strategies as defined in Title 13, California Code of Regulations, §§2700 through 2710 and meet the California Air Resources Board's most recent certification standards for off-road heavy duty diesel engines. The construction-contract specifications will require the contractor to submit a comprehensive inventory of all off-road construction equipment that will be used during any portion of the construction project. The inventory shall include each piece of equipment's license plate number, horsepower rating, engine production year, confirmation that the equipment contains a Level 3 abatement device verified by the California Air Resources Board, and projected hours of use or fuel throughput for each piece of equipment. The contractor shall update the inventory and submit it monthly to the SFPUC throughout the duration of the project.
5.13.3b Diesel Particulate Matter Reduction – On-site Haul Trucks The SFPUC shall ensure that diesel-fueled haul trucks restricted to on-site routes are model year 2004 or newer.
5.14 Noise and Vibration
5.14.1 Noise Controls The SFPUC shall incorporate into contract specifications a requirement that construction noise shall not exceed the following ordinance daytime and nighttime noise limits to the extent feasible: 63 and 53 A-weighted decibels (dBA), respectively (energy equivalent noise level [L_{eq}]; Table B11-152 of Section B11-152 of the Santa Clara County Code) for mobile equipment, and 60 dBA and 50 dBA (L_{eq}), respectively, as required in Section B11-154(6)(a) of the Santa Clara County Code, for stationary equipment at receptors located in Santa Clara County; 58 and 53 dBA, respectively (L_{eq}: Table 6.60.040A in Section 6.60.040 of the Alameda County General Code) for all equipment at receptors located in Alameda County. In addition, daytime construction noise levels shall not exceed the 70-dBA speech interference criterion and nighttime construction noise levels will not exceed the 50-dBA sleep interference criterion at sensitive receptors. Since most receptors are located 3,000 feet or more from project construction areas, noise attenuation rates over such long distances can vary depending on atmospheric absorption and topographic characteristics. Since project-related construction noise level estimates presented in Tables 4.14.5 and 4.14.6, in Section 4.14, Noise and Vibration, only exceed the 50-dBA sleep interference criterion by 1 dBA, it is possible that no noise control measures will be needed to meet these criteria or ordinance noise limits at the closest sensitive receptors. However, if noise levels are found to exceed these criteria or noise ordinance limits, measures that could be implemented to reduce noise levels include the following: Noise generated by nighttime operations (10 p.m. to 7 a.m.) in the outer margins of Borrow Area E and at Staging Area 11 shall be limited as necessary to ensure that this facility can meet the nighttime noise ordinance limit (Santa Clara County Code limits mobile equipment to 53 dBA and stationary equipment to 50 dBA) and not exceed the 50-dBA sleep interference criterion at Receptor B and any other more distant residential receptors. To meet these criteria at this receptor or if certain types of peak noise events occur and become disturbing (e.g., banging or hammering at the repair facility or use of backup beepers), it may become necessary to enclose equipment repair

(continued)

Table S.4 (Continued)

MITIGATION MEASURE

5.14.1 Noise Controls (continued)

facilities or restrict noise-generating activities during the night to ensure that all nighttime operations associated with the borrow and staging areas minimize the potential for sleep disturbance at this receptor.

Implement feasible noise controls on all equipment operating in Borrow Area E and Staging Area 11, such as the following:

- Use best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) for all equipment and trucks in order to minimize construction noise impacts.
- Locate stationary noise sources as far from sensitive receptors as feasible when space is available and there is no conflict with worker safety. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate when space is available and there is no conflict with worker safety) will be used to meet local noise ordinance limits to the extent feasible. Enclosure opening or venting should face away from sensitive receptors. If any stationary equipment (e.g., generators) is operated beyond the time limits specified by the pertinent noise ordinance, this equipment should conform to the affected jurisdiction's pertinent day and night noise limits at the receptor sites.
- Locate material stockpiles as well as maintenance/equipment staging and parking areas as far from the closest residential receptors as possible. Alternatively, enclose any equipment repair facilities as necessary to ensure that the closest residents are not disturbed by nighttime noise.
- Prohibit haul and delivery trucks from operating within 200 feet of any residential uses during the nighttime hours (10 p.m. to 7 a.m.) if noise levels exceed the nighttime thresholds. If sensitive receptors are beyond 200 feet from the haul route, then limited truck operations shall be allowed between 10 p.m. to 7 a.m.; however, noise generated by these operations cannot exceed the 50-dBA sleep interference criterion at the closest receptors.
- Designate a project liaison to be responsible for responding to noise complaints during the construction phases. The name and phone number of the liaison will be conspicuously posted at construction areas and on all advanced notifications. This person will take steps to resolve complaints, including periodic noise monitoring, if necessary. Results of noise monitoring will be presented at regular project meetings with the project contractor, and the liaison will coordinate with the contractor to modify any construction activities that generated excessive noise levels.
- Require a reporting program that documents complaints received, actions taken to resolve problems, and effectiveness of these actions.
- If impact equipment (e.g., jack hammers, pavement breakers, and rock drills) is used during project construction, use hydraulically or electric-powered equipment wherever feasible to safely conduct the required activity to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust will be used if required to reduce noise levels to within acceptable thresholds (a muffler can lower noise levels from the

(continued)

Table S.4 (Continued)

MITIGATION MEASURE
5.14.1 Noise Controls (continued) exhaust by up to about 10 dBA). External jackets on the tools themselves will be used, if required to reduce noise levels to within acceptable thresholds, which could achieve a reduction of 5 dBA. Quieter procedures, such as drilling rather than impact equipment, will be used whenever feasible to safely conduct the required activity. • If pile driving is used for construction of the jetty in the southern portion of the reservoir, use sonic or vibratory pile drivers instead of impact pile drivers wherever feasible depending on site or soil conditions (sonic pile drivers are only effective in some soils). • Prohibit pile driving activities during the evening and nighttime hours (7 p.m. to 7 a.m.).
5.14.3 Blasting Noise Control If peak noise events associated with controlled blasting are found to exceed the Alameda County Noise Ordinance maximum noise limit of 70 dBA (L_{max}) at any Alameda County residential receptors or 75 dBA (L_{max}) at any Santa Clara County residential receptors, blasting charges shall be modified to be consistent with these noise limits, which would require blasting charges to be reduced so that noise levels do not exceed 112 dBA (L_{max}) at 50 feet or 106 dBA (L_{max}) at 100 feet. Alternatively, if blasting charges cannot be reduced sufficiently, then frequency of blasting (number of blast events during any given day or hour) shall be reduced to meet ordinance noise limits.
5.15 Utilities, Service Systems, and Public Services
None required.
5.16 Mineral and Energy Resources
None required.
5.17 Cumulative Impacts
5.17.1 Restrict Truck Operations at Night The SFPUC shall restrict total truck volumes from all WSIP projects on Calaveras Road near the watershed keeper's residence (located approximately 225 feet east of the road) to 60 vehicles and 30 trucks per hour during nighttime hours or another vehicle mix that will achieve the 50-dBA sleep interference threshold. Truck traffic shall be coordinated through the SFPUC WSIP construction coordinator designated in Mitigation Measure 6.1.

Chapter 2, Introduction and Background

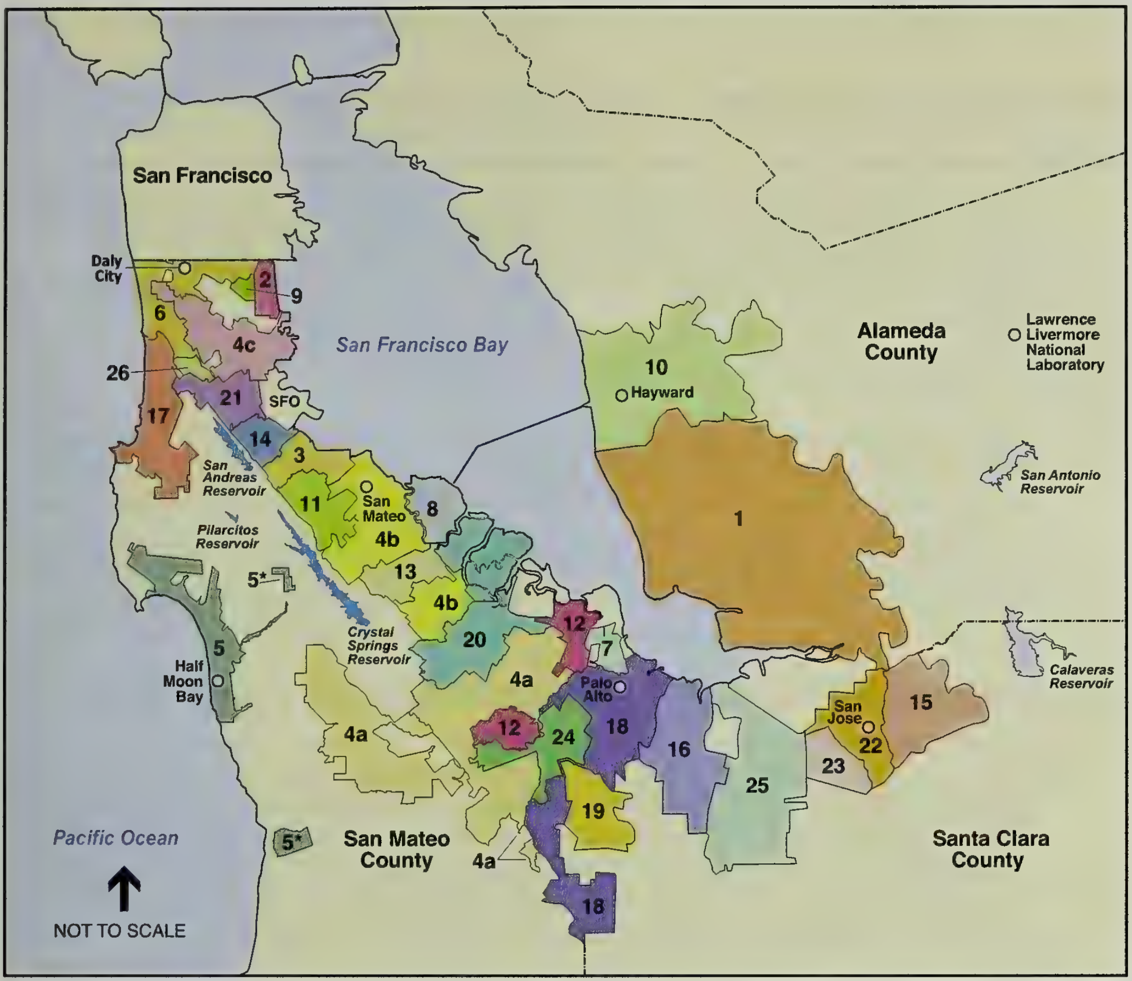
On EIR page 2-2, the second and third sentences of the second paragraph under Subsection 2.2.1, SFPUC's Regional Water System Overview, are revised as follows:

> The wholesale customers are largely represented by the Bay Area Water Supply and Conservation Agency (BAWSCA), which consists of ~~27~~ 26 total customers, shown in Figure 2.2, SFPUC Water Service Area – San Francisco and SFPUC Wholesale Customers. Some of these wholesale customers have other sources of water in addition to what they receive from the SFPUC regional water system, while others rely completely on the SFPUC for supply.

Figure 2.2, SFPUC Water Service Area – San Francisco and SFPUC Wholesale Customers, on EIR page 2-4, is revised to show this change in the number of BAWSCA customers (two BAWSCA customers have merged) and to identify the areas of the Coastside County Water District that are not served by the SFPUC. The revised figure is shown on the following page.

The first complete paragraph on EIR page 2-5 is revised as follows:

> To address the potential environmental impacts of the WSIP, the San Francisco Planning Department prepared a Program EIR (PEIR), which was certified by the San Francisco Planning Commission on October 30, 2008 (San Francisco Planning Department 2008). At a project level of detail, the PEIR evaluated the environmental impacts of the WSIP's water supply strategy; at a program level of detail, it evaluated the environmental impacts of the WSIP's facility improvement projects. This EIR tiers from the PEIR, and the analyses of the WSIP that are relevant to this project are incorporated by reference into this EIR. Also, to the extent affected by the CDRP, this EIR re-evaluates impacts analyzed as part of the PEIR water supply and system operations analysis for the Alameda Creek watershed. Except for impacts to the Alameda Creek watershed related to this project that are reevaluated in this document, as explained here, ~~All~~ WSIP-related impacts to which this project contributes have been examined at a sufficient level of detail in the PEIR, ~~enabling those effects to be mitigated or avoided through mitigation measures that are included either as part of the WSIP approval by the SFPUC or revisions that were made to the WSIP by the SFPUC prior to WSIP approval~~ and no new, relevant information is available to augment that analysis.


San Francisco
Daly City
2
9
6
4c
26
21
SFO
17
14
San Andreas Reservoir
3
11
San Mateo
8
4b
Pilarcitos Reservoir
13
5*
4b
Crystal Springs Reservoir
20
5
Half Moon Bay
12
7
4a
Palo Alto
4a
12
24
18
16
25
19
18
4a
5*
San Francisco Bay
10
Hayward
Alameda County
Lawrence Livermore National Laboratory
1
San Antonio Reservoir
Calaveras Reservoir
15
San Jose
22
23
Santa Clara County
San Mateo County
Pacific Ocean
NOT TO SCALE

Legend

(Wholesale customers and members of Bay Area Water Supply and Conservation Agency)

1 Alameda County Water District
2 City of Brisbane
3 City of Burlingame
4a CWS – Bear Gulch
4b CWS – Mid-Peninsula
4c CWS – South San Francisco
5 Coastside County Water District
6 City of Daly City
7 City of East Palo Alto
8 Estero Municipal Improvement District
9 Guadalupe Valley Municipal Improvement District
10 City of Hayward
11 Town of Hillsborough
12 City of Menlo Park
13 Mid-Peninsula Water District
14 City of Millbrae
15 City of Milpitas
16 City of Mountain View
17 North Coast County Water District
18 City of Palo Alto
19 Purissima Hills Water District
20 City of Redwood City
21 City of San Bruno
22 City of San Jose (North)
23 City of Santa Clara
24 Stanford University
25 City of Sunnyvale
26 Westborough Water District

* Portions of Coastside County Water District not served by the SFPUC regional water system.

SOURCE: BAWSCA, 2010

NOTE: For the purposes of this EIR, the California Water Service (CWS) Company is a single wholesale customer with three different water service districts.

FIGURE 2.2: SFPUC WATER SERVICE AREA - SAN FRANCISCO AND SFPUC WHOLESALE CUSTOMERS (REVISED)

Chapter 3, Project Description

The third sentence of the paragraph at the top of EIR page 3-14 is revised as follows:

> It provides only high-volume releases, with little provision for small adjustments in flow (the flow range of the cone valve is between 130 and approximately ~~870~~ 1,000 cfs depending on reservoir level and the flow range of the low-flow valve is between 5 and 25 cfs).

The second complete paragraph on EIR page 3-20 is revised as follows:

> In response to the DSOD requirement to lower the reservoir elevation to 705 feet, the SFPUC released approximately ~~37,385~~ 30,000 AF of water to Calaveras Creek through the cone valve between December 2001 and February 2002. The SFPUC released water through the cone valve two more times during the CEQA baseline period to maintain the reservoir at the DSOD restricted level, releasing approximately ~~33,574~~ 27,000 AF from March 2005 through May 2005 and ~~65,402~~ 45,000 AF from March 2006 through June 2006. Water has not been released through the cone valve since July 2006.

The next-to-last sentence of the paragraph at the top of EIR page 3-30 is revised and a new sentence is added, as follows:

> If the quality of the rock in the channel is excavated and is competent, the new excavated channel would not require any reinforcement. However, if the quality of the rock is poor, the ~~walls of the channel would be stabilized with shotcrete and rock bolting*~~ bottom of the channel would be stabilized by three grade control structures. Each of the structures would be approximately 3–5 feet wide and extend 5–10 feet into the rock.

The third paragraph under Subsection 3.5.17, Access and Roads, on EIR page 3-50 is revised as follows:

> Calaveras Road north of the dam, i.e., between Interstate 680 and the dam access road, would be used as the major hauling route for imported materials for dam construction. For traffic safety reasons, the SFPUC would request permission from Alameda County to close the section of Calaveras Road between a point immediately south of the intersection with Geary Road (south of the SVWTP) and a point near the Santa Clara County line (south of the dam access road) to the public, Monday through Friday, except for emergency vehicles, for hauling of the imported materials for the dam during two periods. This segment of Calaveras Road would remain open on weekends and all major holidays. Access to the northern segment of Calaveras Road would also be available at all times from the north via I-680.
>
> The road would be closed for approximately 2 months in summer 2011, then reopened. The second closure period would last for approximately 18 months beginning in winter 2012. In addition, the SFPUC would request permission from Santa Clara County to close the portion of Calaveras Road between the Alameda County line and Felter road (near the south end of the reservoir) during the same two periods; the purpose of the additional closure would be to prevent private vehicles that may enter Calaveras Road from the south from the need to turn around at a dead end at the Alameda County line. ~~The SFPUC may also need to request permission to close these sections of Calaveras Road in both Alameda and Santa Clara Counties at other times, possibly including~~

> ~~weekend days, when air quality monitoring indicates unacceptable levels of dust (see Section 4.9, Hazards and Hazardous Materials, for further discussion).~~ The section of Calaveras Road north of Geary Road would remain open during construction and would be used by both private and construction vehicles. Some heavy equipment may be delivered to Borrow Area E or the adjacent Staging Area 11 by trucks traveling on Interstate 680 to the southern portion of Calaveras Road in Milpitas and then on Felter Road and Marsh Road. No improvements to Calaveras Road are expected to be needed to facilitate project construction. Following construction, Calaveras Road between Interstate 680 and the dam access road would be repaved as needed to restore the road to its pre-construction condition.

The following change is made to the second sentence of the first paragraph under 3.5.6, Operation of the Reservoir during Construction, on EIR page 3-62:

> It would be operated to beneficially use the natural inflow whenever possible and to release water as necessary to the SVWTP or Calaveras Creek to maintain the reservoir within these limits.

The second paragraph under 3.6.3, Cone Valve Operations, on EIR page 3-65, is revised as follows:

> As discussed above, during the CEQA baseline period, the SFPUC released approximately ~~37,385~~ 30,000 AF of water to Calaveras Creek through the cone valve between December 2001 and February 2002, ~~33,574~~ 27,000 AF from March 2005 through May 2005, and ~~65,402~~ 45,000 AF from March 2006 through June 2006 to comply with the DSOD-restricted reservoir operation level. Water has not been released through the cone valve since July 2006.

A new bullet point is added on EIR page 3-74 as follows:

- City of Milpitas
  - Transportation permit for the movement of vehicles/loads to the project site on any applicable City roads that are not approved truck routes.

Chapter 4, Environmental Setting and Impacts

Section 4.2, Plans and Policies

The first sentence in the first paragraph on EIR page 4.2-9 is deleted as follows:

> ~~The SFPUC is preparing a Habitat Reserve Program (HRP) to provide a coordinated and consolidated approach to compensate for habitat impacts that would result from proposed implementation of the SFPUC WSIP in the San Joaquin Valley, Sunol Valley, Bay Division, and Peninsula regions of the SFPUC water system (San Francisco Planning Department 2007)~~.

The reference cited at the end of this sentence is also deleted from the References list on EIR page 4.2-19:

> ~~San Francisco Planning Department. 2007. *Notice of Preparation, Habitat Reserve Program*, July 27, 2007~~

Section 4.3, Land Use, Agricultural Resources, and Recreation

In the discussion of Impact 4.3.6, the second paragraph on EIR page 4.3-21 is revised as follows:

> Blasting, which would be limited to weekdays, and other construction activities could increase local dust levels. Emissions of particulate matter (PM) from dust and dust contain naturally occurring asbestos (NOA) and metals could be hazardous to hikers using trails in the Sunol Wilderness near the construction areas and to recreational bicyclists using Calaveras Road (see Sections 4.9 and 4.13, Hazards and Hazardous Materials and Air Quality). Bay Area Air Quality Management District regulations prohibit construction activities in NOA containing areas from resulting in visible dust beyond the project site boundaries, and require dust control measures to reduce impacts on Air Quality from PM emissions. ~~In accordance with these regulations, Mitigation Measures 5.9.2a and 5.13.1a require implementation of dust control measures to reduce emissions of NOA, metals and PM during project construction. In addition, Mitigation Measure 5.9.2a includes monitoring requirements to ensure that dust is effectively controlled and corrective actions, including temporary suspension or work, if needed to prevent impacts on offsite receptors.~~
>
> The SFPUC proposes to implement dust control measures, risk-based trigger levels, monitoring activities, and corrective actions specified in an Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program, subject to approval by the Bay Area Air Quality Management District, as described in Mitigation Measure 5.9.2a. Implementation of dust control measures specified in these plans would prevent off-site migration of visible dust and maintain airborne asbestos and metals at concentrations below risk-based trigger levels at the perimeter of the CDRP work area. These dust control measures are designed to prevent airborne asbestos and metals from migrating beyond the work area perimeter at concentrations in excess of regulatory-approved risk-based trigger levels. Refer to Mitigation Measure 5.9.2a for a detailed description of these dust control measures, on pp. 5.9-5-27 to 5-30. ~~These dust control measures are designed to prevent emissions of NOA, metals and PM in accordance with the applicable regulatory requirements., and implementation of these measures is expected to prevent impacts from construction-related dust on recreational hikers and bicyclists. However, offsite emissions of dust due to unexpected conditions such as extraordinarily high winds could pose a potential hazard to recreational hikers or bicyclists despite the required dust control measures. In the unlikely event of such an occurrence, temporary trail and/or road closures could be requested by the SFPUC based on air quality monitoring. In such an event, Mitigation Measure 5.9.2a requires the SFPUC to coordinate with EBRPD and Alameda County to determine corrective actions that may include signage, other notification, or temporary closures.~~ In addition, implementation of Mitigation 5.13.1 would reduce emission of particulate matter during project construction. Implementation of Mitigation Measures 5.9.2a and 5.13.1 ~~these mitigation measures would reduce the potential impacts of dust from construction activities and related hazards on recreational uses to a less-than-significant level.~~ would prevent off-site migration of visible dust and airborne asbestos and metals at concentrations above regulatory-approved risk-based trigger levels, and therefore project construction would not subject the recreationalists and EBRPD visitors and park workers to an unacceptable risk of exposure to asbestos or naturally occurring metals and potential impacts would be reduced to less than significant.

The second paragraph on EIR page 4.3-22 is revised as follows:

> Calaveras Road north of the dam, i.e., between I-680 and the dam access road, would be used as the major hauling route for imported materials for dam construction. For traffic safety reasons, the SFPUC would request permission from Alameda County to close the section of Calaveras Road between a point immediately south of the intersection with Geary Road (south of the SVWTP) and a point near the Santa Clara County line (south of the dam access road) Felter Road (at the south end of the reservoir) to the public, Monday through Friday, except for emergency vehicles, for hauling of the imported materials for the dam during two periods. In addition, the SFPUC would request permission from Santa Clara County to close the portion of the road between the Alameda County line and Felter Road during the same two periods. The road would be closed on weekdays for approximately 2 months in summer 2011, then reopened. The second closure period would last for approximately 18 months on weekdays beginning in winter 2012. ~~This section of the road may be closed at other times, including weekend days, when air quality monitoring indicates unacceptable levels of dust (see Section 4.9, Hazards and Hazardous Materials, for further discussion).~~ The section of Calaveras Road north of Geary Road would remain open during construction and would be used by both private and construction vehicles. Recreationalists and visitors would have continuous weekday access to the Sunol Regional Wilderness from the north via I-680 and the northern segment of Calaveras Road and Geary Road. Access from the southern segment of Calaveras Road would also be available on weekends and all major holidays, typically peak recreation periods throughout the year.

Section 4.4, Vegetation and Wildlife

The first sentence of the paragraph at the top of EIR page 4.4-40 is revised as follows:

> In spring 2007 and 2008, surveys for the California tiger salamander were conducted on behalf of the SFPUC at ponds near Calaveras Reservoir and in Sunol Valley ~~in support of the SFPUC's Habitat Reserve Program (HRP)~~ (Condor Country Consulting 2008).

The following changes are made to EIR pages 4.4-72 through 4.4-74, starting with the partial paragraph at the bottom of page 4.4-74:

> The SFPUC has identified ~~four~~ five proposed mitigation areas ~~which~~ that~~, when combined,~~ contain adequate and feasible opportunities to fully compensate for the impacts described in this section (Appendix C.2 and Appendix C.3). These are the South Calaveras, San Antonio, Sage Canyon, ~~and~~ Goat Rock, and Koopmann Road Mitigation Areas~~.~~; final design of habitat compensation actions within these areas and/or other mitigation areas will be consistent with associated resource agency direction (i.e., project permits). This EIR includes a screening evaluation of impacts on the environment in the ~~four~~ five mitigation areas. Surveys for sensitive species and habitats in the ~~four~~ five mitigation areas were carried out in order to avoid or minimize potential impacts of mitigation measures that would disturb the environment. The impacts of the mitigation measures are discussed in Section 5, Mitigation Measures Proposed to Minimize Potentially Significant Adverse Impacts of the Project. ~~The four mitigation areas also are included in the SFPUC's proposed Habitat Reserve Program (HRP), which will be the subject of a separate EIR to be published in 2010.~~

Following is a brief description of each proposed mitigation area, characterizing each area and describing mitigation opportunities at each area.[9] In addition to restoring and establishing sensitive natural communities and species habitat, the mitigation areas would be preserved in perpetuity.

South Calaveras Mitigation Area

The South Calaveras Mitigation Area is a ~~641~~ 323-acre area south of Calaveras Reservoir, located on SFPUC-owned land east of the intersection of Calaveras and Felter Roads and mostly north and east of Marsh Road in Santa Clara County. The area is a mosaic of oak woodlands, grasslands, and riparian habitats that is not accessible to the public. Vegetation is composed of non-native grassland (~~459~~ 253 acres)~~[9]~~[10], mixed evergreen forest/oak woodland (~~16~~ 56 acres), coyote brush scrub (~~18~~ 5 acres), Diablan sage scrub (1 acre), ~~mixed riparian woodland (10 acres), coast live oak riparian woodland (97 acres),~~ and valley oak woodland (~~9~~ 4 acres)~~, oak savannah (17 acres), seasonal wetlands (2 acres), and seep wetland (2 acres)~~. There are ~~four~~ three open water stock ponds totaling about ~~5~~ 4 acres. ~~A small portion (4 acres) of the mitigation area includes buildings and other structures associated with the former Calaveras Test Site, described in Section 4.9.1.4.~~ Ephemeral drainages and intermittent streams~~, including Calaveras Creek,~~ collect and convey water through the area. The mitigation area provides opportunities to enhance or establish about ~~11.42~~ 4.14 acres of seasonal wetlands, ~~1.25~~ 0.10 acres (~~5,254~~ 578 linear feet [lf]) of intermittent stream, 0.43~~32~~ acre (13,726 ~~4,756~~ lf) of ephemeral channel, ~~5.13~~ 3.48 acres of stock ponds, ~~4.2~~ 51.2 acres of oak riparian forest, ~~3.3 acres of sycamore alluvial woodland, 2.2 acres of riparian scrub,~~ and 3.94 ~~4.53~~ acres of perennial grasslands, ~~and 9.0 acres of grasslands~~ including 3.86 acres with the callippe silverspot butterfly larval host plant johnny jump-up (*V. pedunculata*). Aquatic habitat for the California red-legged frog and California tiger salamander is impaired by the presence of bullfrogs and predatory fish and could be improved by removing these predators.

San Antonio Mitigation Area

The San Antonio Mitigation Area is a ~~254~~248-acre area located on SFPUC-owned land on the northeast shore of San Antonio Reservoir at the mouths of San Antonio and Indian Creeks in Alameda County. Vegetation includes non-native grassland (~~171~~ 169 acres), mixed evergreen forest/oak woodland (~~10~~9 acres), valley oak woodland (5 acres), mixed riparian woodland (~~12~~ 9 acres), sycamore alluvial woodland (25 acres), willow riparian woodland (~~22~~ 15acres), Diablan sage scrub (~~7~~ 9 acres), and one small (0.17 acre) pond~~coyote brush scrub (2 acres), mulefat scrub (16 acres), seasonal wetland (1 acre), and 4 acres of open water in San Antonio Reservoir~~. The mitigation area provides opportunities to enhance, ~~or~~ establish, or rehabilitate about 0.23 acres (2,784 lf) of ephemeral stream, ~~8.4~~ 8.73acres (19,654 ~~5,600~~ lf) of intermittent stream, ~~10.5~~ 27.5 acres of sycamore alluvial woodland, 0.17 acres of open water, 0.90 acres of seasonal wetland, 1.03 acres of riparian scrub, 4.77 acres of mixed riparian woodland, 1.73 acres of willow riparian, ~~19.6~~ 2.25 acres of oak riparian forest, ~~28.0~~ 57.45 acres of upland oak woodland, and ~~70.0~~ 96.27 acres of oak savannah, and 9.58 acres of upland scrub.

Sage Canyon Mitigation Area

The Sage Canyon Mitigation Area is a 584-acre area located on SFPUC-owned land north of the Arroyo Hondo arm of Calaveras Reservoir. It straddles the Alameda/Santa

Clara County line and extends from the reservoir edge to the ridge top. The drainage where the ACDD tunnel terminates defines the western boundary of the mitigation area. Vegetation includes non-native grassland (~~309~~304 acres), mixed evergreen forest/oak woodland (~~112~~ 110 acres), ~~valley oak woodland (3 acres), valley oak/blue oak woodland (1 acre), mixed riparian woodland (4 acres),~~ Diablan sage scrub (~~101~~ 95acres), oak savannah (~~49~~ 34 acres), and rock outcrop (~~5~~4.6 acres). A small (about 0.31-acre) stock pond is located in the northeast portion of the mitigation area. On its northern boundary, the mitigation area is adjacent to federally designated critical habitat for Alameda whipsnake (Unit 5B) (USFWS 2006a). Cattle have access to the mitigation area although steep slopes reduce their use of the eastern portion of the area. The mitigation area provides opportunities to enhance 2.84 acres (46, 201 lf) of ephemeral channel, 0.31 acres of open water, 0.18 acres seasonal wetland, 0.20 acres of seep wetland, 3.73 acres of mixed riparian woodland, 108 acres of oak woodland, 34 acres of oak savannah, 299 acres of non-native grassland, 95.4 acres of upland scrub, and to preserve 4.6 acres of rock outcrop. ~~establish about 66 acres of Diablan sage scrub in grasslands adjacent to a large (186-acre) existing stand of Diablan sage scrub that extends east from within the mitigation area.~~ About 38 acres of annual grasslands in the mitigation area contain the callippe silverspot butterfly larval host plant, johnny jump-up.

Goat Rock Mitigation Area

The Goat Rock Mitigation Area is a 35-acre area located on SFPUC-owned land situated between Valpe Ridge (a southeastern continuation of Apperson Ridge) and upper Alameda Creek just downstream from the ACDD. Vegetation includes 35 acres of serpentine grasslands containing a fine-textured mosaic of rocky outcropping supporting a very high diversity of native species. The mitigation area provides opportunities to enhance and preserve 35 acres of serpentine grasslands.

Koopmann Road Mitigation Area

The Koopmann Road Mitigation Area is approximately 463 acres of SFPUC land east of Interstate 680 and north of State Route 84 in the northwest portion of the Alameda watershed. The SFPUC has determined that the site is not essential for water supply purposes and designated it as surplus land, appropriate for sale for other uses, including potential development. Selected in this case for use as a mitigation area, it contains four stock ponds; willow riparian (0.6 acres); oak woodlands (87 acres); sycamore alluvial woodlands (7 acres); and non-native annual grasslands (362 acres). The mitigation area provides opportunities to enhance or establish about 0.51 acres of seasonal wetlands; 1.22 acres (7,277 lf) of ephemeral channel; 0.61 acre (2,570 lf) of intermittent stream; and 1.14 acres of stock ponds. Aquatic habitat for the California red-legged frog and California tiger salamander is impaired by the presence of non-native predators and could be improved by removing these predators.

The new footnote for this text change, added to EIR page 4.4-73, is shown below, and subsequent footnotes in the section will be renumbered accordingly:

> [9] Final methods of mitigation (e.g., restoration, rehabilitation, re-establishment, establishment, enhancement, and/or preservation) subject to resource agency review and approval.

Footnote 9, at the bottom of EIR page 4.4-73, is also revised and renumbered as follows:

> ~~[9]~~ [10] Note that the acres of land cover presented for each mitigation area may not exactly match the size of the mitigation area as a result of rounding. Final acreages subject to resource agency review and approval.

The second sentence of the second paragraph under "Impact Conclusions" (for Impact 4.4.1) on EIR page 4.4-83 is revised as follows:

> Mitigation Measure 5.4.3 requires compensation for permanent impacts on wetlands, pond habitat, streams, and riparian habitat in the Koopmann Road, South Calaveras, and San Antonio Mitigation Areas.

The source cited at the end of the second sentence of the second paragraph under "Alameda Creek Downstream of ACDD to Calaveras Creek Confluence" on EIR page 4.4-88 is revised as follows:

> California red-legged frogs take, on average, about 20 weeks to develop from egg to terrestrial frog (USFWS ~~2002b~~ 2006c, p. 19249).

The last sentence of the first paragraph under "Impact Conclusions" (for Impact 4.4.2) on EIR page 4.4-91 is revised as follows:

> In accordance with Mitigation Measure 5.4.3 the SFPUC would compensate for temporary and permanent habitat loss by improving aquatic breeding habitat in the Koopmann Road and/or South Calaveras Mitigation Areas and enhancing and/or protecting and maintaining aquatic non-breeding habitat (shallow perennial and intermittent channels), upland habitat, and dispersal habitat at all ~~four~~ five mitigation areas.

The next-to-last sentence of the partial paragraph at the top of EIR page 4.4-95 (part of the "Impact Conclusions" discussion for Impact 4.4.3) is revised as follows:

> Mitigation Measure 5.4.3 requires the SFPUC to compensate for unavoidable temporary and permanent impacts on California tiger salamanders during reservoir filling and construction by enhancing aquatic habitat at the Koopmann Road and South Calaveras Mitigation Areas and by preserving and managing upland refuge, forage, and dispersal habitat within suitable and applicable portions of ~~at~~ the ~~all four~~ mitigation areas. These measures would reduce the impacts of construction and filling the reservoir to a less-than-significant level.

The last sentence of the second paragraph under "Impact Conclusions" (for Impact 4.4.4) on EIR page 4.4.97, continuing on EIR page 4.4.98, is revised as follows:

> Implementation of Mitigation Measure 5.4.3, which requires the SFPUC to compensate for unavoidable temporary and permanent impacts, would reduce this impact to a less-than-significant level by establishing scrub/shrub vegetation in grasslands adjacent to a large stand of Diablan sage scrub and preserving rocky outcrop habitat at the Sage Canyon, San Antonio, and South Calaveras Mitigation Areas, and by preserving and

> managing grassland and woodland habitat adjacent to scrub habitat at all ~~four~~ five mitigation areas.

The last sentence of the first paragraph under "Impact Conclusions" (for Impact 4.4.5) on EIR page 4.4-99 is revised as follows:

> In addition, Mitigation Measure 5.4.3 requires the SFPUC to compensate for the direct and indirect loss of johnny jump-ups by protecting and enhancing existing grassland habitat containing johnny jump-ups at the South Calaveras, Koopmann Road, and Sage Canyon Mitigation Areas.

The last sentence of the first paragraph under "Impact Conclusions" (for Impact 4.4.9) on EIR page 4.4-110 is revised as follows:

> Mitigation Measure 5.4.3 requires the SFPUC to compensate for unavoidable impacts of habitat loss during reservoir filling and construction by preserving and managing habitat for upland species of concern, bats, and migratory birds in the ~~South Calaveras,~~ San Antonio, Sage Canyon, ~~and~~ Goat Rock, South Calaveras, and/or Koopmann Road, Mitigation Areas.

The last sentence of the paragraph under "Impact Conclusions" (for Impact 4.4.11) on EIR page 4.4-116 is revised as follows:

> The impact of construction would be reduced to less-than-significant levels by implementation of Mitigation Measure 5.4.3, identified in Chapter 5, Mitigation Measures Proposed to Minimize Potentially Significant Adverse Impacts of the Project, which would compensate for habitat losses by creating, restoring, and enhancing oak woodlands and savannah at the San Antonio Mitigation Area, riparian forest at the ~~South Calaveras~~ Koopmann Road, and San Antonio Mitigation Areas, and enhancing and protecting serpentine grasslands at the Goat Rock Mitigation Area.

Section 4.5, Fisheries and Aquatic Habitat

The first item under the bulleted item at the top of EIR page 4.5-13 is revised as follows:

- Lower Alameda Creek (extended study area):
    - ACWD's upper~~,~~ and middle~~, and lower~~ inflatable dams and quarry pit recharge facilities;

The last sentence at the bottom of EIR page 4.5-24, which continues at the top of page 4.5-25, is revised as follows:

> Water supply and flood control structures have been incorporated into the channel; these structures include a grade control structure at the BART rail crossing (the BART weir) and ~~a series of~~ two inflatable dams for water supply impoundment (including flows imported from the Sacramento-San Joaquin Delta via the South Bay Aqueduct), local aquifer recharge, and diversion.

The next-to-last sentence of the partial paragraph at the top of EIR page 4.5-25 is revised as follows:

> The ~~lower,~~ middle~~,~~ and upper ACWD inflatable dams are also major migration obstacles/barriers in lower Alameda Creek, the middle inflatable dam ~~being generally operated to~~ creat~~e~~ing an 11-foot-high passage obstacle located immediately adjacent to the BART weir.

The third sentence of the paragraph under "Rainbow Trout/Steel Migration and Barriers" on EIR page 4.5-44 is revised as follows:

> These obstructions include the ACFCWCD flood control channel; BART weir, located about 9.5 miles upstream from the creek's confluence with San Francisco Bay; ACWD inflatable dams (ranging in location from about 2 miles upstream of the San Francisco Bay to just below Niles Canyon); the USGS gaging station weir in Niles Canyon; and the PG&E gas pipeline drop structure in Sunol Valley (see Figure 4.5.2: Major Facilities and Fish Passage Barriers/Obstacles in the Alameda Creek Watershed).

The following change is made to the bulleted list after the first full paragraph on EIR page 4.5-45:

- ~~ACWD lower inflatable dam;~~
- ACFCWCD BART weir – considered the most important impediment to fish passage;
- ACWD middle and upper inflatable dams;
- USGS Niles gaging station weir/concrete apron; and
- PG&E gas pipeline concrete apron drop structure.

The following changes are made to EIR pages 4.5-61 and 4.5-62, starting with the second full paragraph on page 4.5-61:

> As described above in Section 4.5.1, diversions from Alameda Creek to Calaveras Reservoir have been reduced since 2001 because of the DSOD restrictions on Calaveras Reservoir. Currently, Calaveras Reservoir is often filled to approximately the maximum permitted storage level with runoff from its natural drainage and, at these times, has no allowed capacity to accept diversions from Alameda Creek. Therefore, while the DSOD restrictions on Calaveras Dam are in effect, the SFPUC has limited need to capture and divert ~~most~~ local watershed runoff from upper Alameda Creek. The post-2002 flows in Alameda Creek downstream of the ACDD, while extremely variable depending on whether or not diversions were being made, have generally been greater than they were prior to the DSOD restrictions (2002).
>
> Modeling of future operations under the proposed project indicates that diversions at the ACDD to Calaveras Reservoir would primarily occur during the October through April rainy season and the greatest diverted/reduced streamflow quantities would occur from December through ~~March~~ February in normal and above-normal years and January of wet years (see Section 4.6, Hydrology). The magnitudes of flows continuing down Alameda Creek past the ACDD during these months would be reduced compared to baseline conditions. However, flows past the ACDD would be increased or remain unchanged from baseline conditions in all other months in all hydrologic year types.

> On a storm-by-storm basis, even when streamflows exceed 650 cfs, existing and proposed diversions to Calaveras Dam substantially reduce the flows and alter the hydrograph, leaving only brief periods of high flows in major storm events. Both duration and magnitude of flows in the creek downstream of the ACDD have been reduced during some storm events because of the diversion and would continue to be reduced by operation of the proposed project. However, the proposed project would include flow bypasses consistent with the 1997 MOU whenever those flows are naturally present in upper Alameda Creek.

The sentence that concludes the partial paragraph at the top of EIR page 4.5-64 is revised as follows:

> Based on the flow study and spawning and egg incubation habitat requirements, the minimum bypass flows, whenever naturally present, would be expected to provide adequate surface water to maintain spawning and egg incubation habitat functions in Alameda Creek.

The next-to-last sentence in the partial paragraph at the top of EIR page 4.5-71 is revised as follows:

> Additionally, annual pulse-flow releases associated with water evacuations and required cone valve testing have provided flows ranging from approximately 130 to approximately ~~870~~ 1,000 cfs (depending on reservoir level), which also likely contributed to maintenance of these geomorphic processes.

The second full sentence of the paragraph at the top of EIR page 4.5-74 is revised as follows:

> As with the upstream reach, some peak flows in Alameda Creek would also be substantially reduced in drier years, primarily as a result of renewed upstream diversions at the ACDD.

The first paragraph under Impact 4.5.8 on EIR page 4.5-78 is revised as follows:

> As discussed in Subsection 4.5.1, Setting, the extended study area includes the Niles Canyon and lower Alameda Creek reaches. Habitat conditions in both reaches have been heavily modified and altered as a result of past human activities, which have included use of the creek as a conveyance facility for water supply, construction of levees and maintenance of the channel for flood control, aggregate mining, adjacent urbanization, and diking, channelization, and pond construction for commercial salt production. Water supply, erosion control, and flood control structures were constructed in the channel; these structures include the BART weir and PG&E gas pipeline drop structure, and ~~a series of~~ two inflatable dams for water supply impoundment (including capture of flows imported from the Sacramento-San Joaquin Delta via the South Bay Aqueduct), local aquifer recharge, and diversion. These features prevent fish migration and impair other habitat functions and would be expected to continue to do so ~~for an undefined time~~ until modified. The BART weir presents a complete barrier to all migrating anadromous fish species, including steelhead, with the possible exception of Pacific lamprey (Gunther et al. 2000, p. 15). The ~~lower,~~ middle~~,~~ and upper ACWD inflatable dams are also major migration obstacles/barriers in lower Alameda Creek.

The last paragraph on EIR page 4.5-79, continuing on page 4.5-80, is revised as follows:

> The largest predicted decrease in flow in lower Alameda Creek at the Niles gage would occur in a month similar to January 2005, with a reduction in average monthly flow of 46 cfs or 18 percent (as stated above) of the average monthly flow recorded in January 2005. Further review of the data reveals that flow reductions are calculated to occur in December through March of normal to wet years and April of wet years. In ~~all~~ most other months, including winter months of below-normal and dry water years, flow in upper Alameda Creek and at the Niles gage would either remain the same or increase with implementation of the proposed project. However, diversions by ACWD (specifics regarding the frequency, magnitude, and duration of future diversions are unknown) would further affect flows in the portion of Alameda Creek within the extended study area (i.e., at the mouth of Niles Canyon and lower Alameda Creek).

Section 4.6, Hydrology

The fourth sentence of the second paragraph under Impact 4.6.3 on EIR page 4.6-67 is revised as follows:

> The extent of influence of the groundwater drawdown is expected to be localized and to have minimal impact on groundwater resources outside the immediate vicinity of the construction site, because the wells would be relatively shallow (e.g., approximately 5 feet below the deepest excavation, that is, approximately ~~30~~ 70-100 feet in the Temblor Sandstone and ~~20–75~~ 35–80 feet in the Franciscan Complex, based on proposed excavation depth [see Subsection 3.5.1.2, Excavation and Construction of the Foundation and Embankment, in Chapter 3, Project Description]).

On EIR page 4.6-86, the second and third paragraphs are revised, and a new paragraph is added after the third paragraph, which continues on EIR page 4.6-87:

> The significance determination differs from the determination of a significant and unavoidable impact on hydrology in the WSIP Draft and Final PEIRs (WSIP Impact 5.4.1-2). The primary reason for the difference is that with the proposed project as currently configured, more water would flow down Alameda Creek downstream of the diversion dam than was assumed to be the case with the proposed project as configured in the WSIP Draft PEIR. The project as now proposed ~~includes an ACDD Operations Plan and~~ contains a bypass component and operational feature in which fisheries releases would be made from the proposed ACDD bypass rather than solely from Calaveras Reservoir as assumed in the WSIP Draft PEIR. The HH/LSM modeling analysis presented above accounts for these project changes. In the WSIP Draft PEIR, the HH/LSM modeling, which did not assume ~~an ACDD Operations Plan~~, a bypass structure or the bypass of fisheries releases downstream of the ACDD, predicted an overall decrease in average annual flows below the ACDD of 14 percent. Further, in the WSIP Draft PEIR analysis, flows were reduced in wet, above normal, and normal years. Flows in below-normal and dry years under the WSIP Draft PEIR analysis were unchanged. As explained above, under the proposed project as now configured, only flows in above-normal and normal years and one-month in wet years show a reduction in flows; in other year types the flows would be the same or increase and overall average annual flows increase by 7 percent. ~~As shown by the analysis above, with the ACDD Operations Plan and the fisheries releases through the proposed ACDD bypass tunnel, the proposed project would not substantially alter stream flows such that they are outside the range of~~

> ~~pre-project conditions and result in substantial hydrologic changes in this reach of the creek.~~
>
> Further, the WSIP Draft PEIR analysis assumed that peak flows from major storms would resemble those currently occurring during much smaller storm events and that smaller storms would not result in any peak flows at all. Mitigation Measure 5.4.1-2 was included in the WSIP Draft PEIR to lessen the WSIP's effects on peak flows. Mitigation Measure 5.4.1-2 is similar to the proposed ACDD Operation Plan that is a part of the CDRP. Nonetheless, it was conservatively concluded in the WSIP PEIR that even with the mitigation measure, the alteration of peak flows in Alameda Creek downstream of the ACDD, coupled with the reduction in average annual flow would represent a substantial hydrologic change and that the impact would therefore be significant and unavoidable. ~~The HH/LSM modeling and the assessment of peak flow events using the USGS 15-minute gage data along with results from the HH/LSM present a more refined picture of what would occur downstream of the ACDD during peak flow events. For all the above reasons, the impact of the proposed project on streamflows in this reach of Alameda Creek would be less than significant.~~
>
> A more refined analysis of the effects of the SFPUC's proposed facilities on flow in Alameda Creek downstream of the ACDD was conducted for this CDRP EIR than was conducted for the WSIP PEIR. As part of the CDRP EIR analysis, a model was developed using 15-minute USGS gage data to analyze the effects of the CDRP on peak flows. The model showed that with the CDRP, including the ACDD Operations Plan, peak flows would be similar in magnitude to those that occur in Alameda Creek below the ACDD under the existing condition. Because the CDRP would result in an increase in average annual flows and little change in the magnitude of peak flows, it would not substantially alter stream flows such that they are outside the range of pre-project conditions and result in substantial hydrologic changes in this reach of the creek. Consequently, the CDRP would have a less-than-significant impact on the hydrology of the reach of Alameda Creek below the ACDD. The change in the significance determination from the WSIP Draft PEIR is attributable to the altered facilities and operations at the ACDD that are part of the CDRP, and the use of a more refined analytical tool.

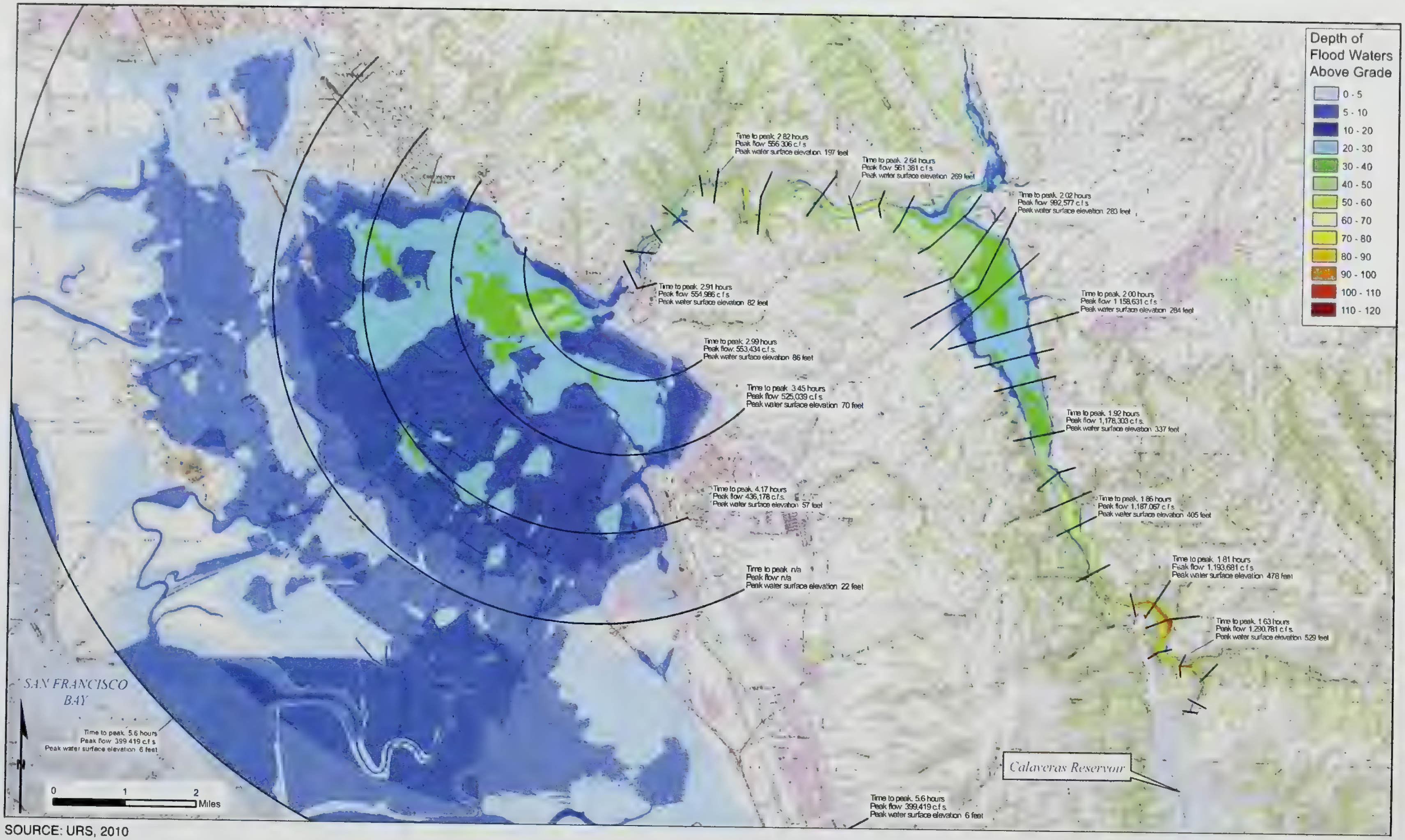
The eighth sentence of the first paragraph under Impact 4.6.8 on EIR page 4.6-98 is revised as follows:

> SFPUC would release water ~~through the cone valve~~ as an operational action and under most circumstances likely would use the cone valve for this purpose.

The reference cited at the end of the first sentence of the first complete paragraph on EIR page 4.6-100 is revised as follows:

> The inundation zone downstream from Calaveras Reservoir that could be flooded in the event of a dam failure was last updated in May 2007 (URS ~~2007~~ 2010).

The source shown on Figure 4.6.17: Depth of Floodwaters from Modeled Breach of Calaveras Dam, on EIR page 4.6-101, is revised. The revised figure is shown on the following page.


Depth of Flood Waters Above Grade
0 - 5
5 - 10
10 - 20
20 - 30
30 - 40
40 - 50
50 - 60
60 - 70
70 - 80
80 - 90
90 - 100
100 - 110
110 - 120
Time to peak: 2.82 hours Peak flow: 556,306 c.f.s. Peak water surface elevation: 197 feet
Time to peak: 2.64 hours Peak flow: 561,381 c.f.s. Peak water surface elevation: 269 feet
Time to peak: 2.02 hours Peak flow: 992,577 c.f.s. Peak water surface elevation: 283 feet
Time to peak: 2.91 hours Peak flow: 554,986 c.f.s. Peak water surface elevation: 82 feet
Time to peak: 2.00 hours Peak flow: 1,158,631 c.f.s. Peak water surface elevation: 284 feet
Time to peak: 2.99 hours Peak flow: 553,434 c.f.s. Peak water surface elevation: 86 feet
Time to peak: 3.45 hours Peak flow: 525,039 c.f.s. Peak water surface elevation: 70 feet
Time to peak: 1.92 hours Peak flow: 1,178,303 c.f.s. Peak water surface elevation: 337 feet
Time to peak: 4.17 hours Peak flow: 436,178 c.f.s. Peak water surface elevation: 57 feet
Time to peak: 1.86 hours Peak flow: 1,187,067 c.f.s. Peak water surface elevation: 405 feet
Time to peak: n/a Peak flow: n/a Peak water surface elevation: 22 feet
Time to peak: 1.81 hours Peak flow: 1,193,681 c.f.s. Peak water surface elevation: 478 feet
Time to peak: 1.63 hours Peak flow: 1,290,781 c.f.s. Peak water surface elevation: 529 feet
SAN FRANCISCO BAY
Time to peak: 5.6 hours Peak flow: 399,419 c.f.s. Peak water surface elevation: 6 feet
N
0 1 2 Miles
Calaveras Reservoir
Time to peak: 5.6 hours Peak flow: 399,419 c.f.s. Peak water surface elevation: 6 feet

SOURCE: URS, 2010

FIGURE 4.6.17: DEPTH OF FLOODWATERS FROM MODELED BREACH OF CALAVERAS DAM (REVISED)

In the section entitled "Impact 4.6.12: Changes in groundwater levels, flows, quality and supplies," the third paragraph on page 4.6-106 is deleted and replaced with the following:

> ~~Downstream of the Sunol Valley, Alameda Creek recharges the Niles Cone Aquifer. As discussed under Impact 4.6.7, wet weather flows in lower Alameda Creek would be reduced compared to the current baseline and increased in comparison to historical conditions (pre-DSOD restriction) in place at the time of the construction of the diversion facilities in lower Alameda Creek.~~
>
> The ACWD obtains about half of its water supplies from the Niles Cone Groundwater Basin. The groundwater basin is recharged by runoff from the Alameda Creek watershed that percolates into the ground from Alameda Creek as the creek leaves Niles Canyon. The ACWD releases some of its State Water Project water to Arroyo de la Laguna to supplement natural runoff and increase recharge of the Niles Cone Groundwater Basin.
>
> The proposed project would affect flow in Alameda Creek in Niles Canyon. The changes in flow from the existing condition that are attributable to the proposed project, and assuming no UACFGP in the Sunol Valley, would be similar to the average monthly and annual changes in flow shown in Tables 4.6.20 and 4.6.21 (pages 4.6-91 and 4.6-92) for Alameda Creek below its confluence with Calaveras Creek. This is because data from the series of USGS gages on Alameda Creek show that most of the water flowing down Alameda Creek immediately below its confluence with Calaveras Creek reaches Niles Canyon. Consequently, the proposed project would cause average annual flow in Alameda Creek at Niles Canyon to decrease by about 5,000 and 4,700 AF in wet and above-normal years and increase by about 1,000 AF, 5,800 AF, and 6,400 AF in normal, below-normal, and dry years, respectively. Averaged over all years, annual flow would increase by about 670 AF. The proposed project would decrease flow in Alameda Creek at Niles Canyon in some months of wetter years and increase it in most other months. The percentage changes in flow in Alameda Creek in Niles Canyon would be smaller than those shown in Tables 4.6.20 and 4.6.21 because, as a result of tributary inflow, total annual flow in Alameda Creek in Niles Canyon is about three times the average annual flow below its confluence with Calaveras Creek. Overall, the proposed project would have little effect on the availability of water for recharge to the Niles Cone Groundwater Basin and on ACWD's water supply.
>
> The SFPUC plans to build the UACFGP in the Sunol Valley to recover some of the water that would be bypassed or released to Alameda Creek from the ACDD and Calaveras Reservoir. The effects of the UACFGP together with those of the proposed project are described in the cumulative impacts section of this EIR (Vol. 2, Chapter 6, Section 6.2.3.4, pages 6-32 through 6.35). The effects of the UACFGP on the environment, including effects on ACWD's water supply, will be examined in more detail in a separate EIR on that project. The CEQA environmental review of the UACFGP is expected to begin in 2011.

VOLUME 2

Chapter 4, Environmental Setting and Impacts (Continued)

Section 4.8, Geology, Soils, and Seismicity

On EIR page 4.8-3, the paragraphs under the headings "Geologic Units" and "Dam Site" are revised as follows to address updated geologic information:

Geologic Units

Geology ~~at the dam site, reservoir rim, and borrow sites~~ in the study area consists of ~~three~~ eight bedrock assemblages and several unconsolidated units (see Figures 4.8.1a: Lithology and Geologic Features of the Project Site, and 4.8.1b: Regional Geology and Paleontological Resource Potential). These geologic units[1] are described ~~below by project subarea and a summary of the unit characteristics is provided~~ in Table 4.8.1.

Dam Site

Geology at the dam site is partly complicated by the presence of the secondary faults and large landslides on the right abutment. ~~Lying under the colluvium, alluvium, landslide debris, and part of the shell of the existing dam (fill), all of which would be removed in construction, t~~The replacement dam would be founded on Franciscan Complex mélange at the channel bottom and east of Calaveras Creek and Temblor Sandstone to the west and east (URS 2005b, p. 3-1 and Figure 2D). The mélange consists of a mixture of serpentinite and sheared shale, with local blocks of greywacke sandstone, siliceous schist, and blueschist. The serpentinite and some rock types that form blocks within the mélange contain asbestos minerals (see Section 4.9, Hazards and Hazardous Materials, for further details). Temblor Sandstone is intensely fractured and locally includes thin shale and conglomerate interbeds. One large and several small landslides are located in the east abutment area. Subsurface exploration and testing (URS 2006a) identified open joints and high hydraulic conductivities in the Temblor Sandstone. Joint-filling materials are typically clay and calcite; a very limited occurrence of joints filled with water-soluble gypsum was noted in one core boring (CB-26) (URS 2005a). The Franciscan Complex mélange shale matrix with serpentinite blocks underlies about 70 percent of the dam foundation within the channel bottom and east abutment and is very weak to weak but has low overall hydraulic conductivity (URS 2006a). Landslide debris, which is mapped beneath the right dam abutment, is highly variable in character and generally has low strength. Franciscan Complex rock, although geologically described as very weak to weak, with proper treatment is a suitable foundation material for earthfill dams. Due to the geologic variability at the dam site, the appropriate type of dam for this site is an earthfill structure that has the flexibility to accommodate the different strengths of the foundation materials.

The new footnote for this text change is shown below, and subsequent footnotes in the section will be renumbered accordingly:

> [1] There are two source maps for the regional geology of the study area (Wentworth et al. 1998; Graymer et al. 1996) and the nomenclature of the two maps differs in some areas. Nomenclature from both sources has been presented in Figure 4.8.1b and Table 4.8.1.

The new figure introduced in this text change, Figure 4.8.1b: Regional Geology and Paleontological Resource Potential, is shown on the following page.

On EIR page 4.8-5, Table 4.8.1 is revised as follows to address updated geologic information:

(Revised) Table 4.8.1: Summary of Geologic Units Near Calaveras Dam and Reservoir

Geologic Unit	Map Symbol[1]	Age	Lithology ~~and Occurrence~~
Artificial fill	Haf, af	Historic	Man-made deposits generally of clay, sand, rock, riprap; placed for existing dam embankment
Alluvium	Qal, Qa, Qha	Holocene	Gravel, sand, silt and clay, unconsolidated; occur in Calaveras Creek channel and at south end of reservoir
~~Fluvial terrace deposits~~ Older Alluvium	Qt, Qpa, Qhf2, Qpf	Early Holocene and Pleistocene	Gravel, sand, silt and clay; occur topographically higher than ~~Qal~~ the Holocene age alluvium
Colluvium	Qc	Quaternary	Clay, silt, and sand that underlie gently inclined slopes at the margins of alluvial deposits and fill broad swales and hollows
Landslide ~~debris~~ deposits	Qls	Quaternary	Poorly sorted mixture of the source area formations; occur on moderate to steep slopes underlain by bedrock
Briones Formation	Tbr	Upper Miocene	Sandstone, siltstone, conglomerate, and shell breccia
Orinda Formation	Tor	Upper Miocene	Distinctly to indistinctly bedded, non-marine, pebble to boulder conglomerate, conglomeratic sandstone, and coarse- to medium-grained lithic sandstone
Claremont Formation	Tcs, Tcc	Upper to Middle Miocene	Thinly laminated siliceous shale; exposed between Spillway and Quarry Faults west of Calaveras Creek
Temblor Sandstone	Tts	Upper to Middle Miocene	Fine grained, slightly to moderately cemented, thick bedded sandstone; occurs on left abutment
Great Valley Sequence (Berryessa Formation)	Kcu, Kcg, Kau, Ks	Cretaceous	Mudstone occurs west of Gully Fault on Observation Hill; Cobble Conglomerate occurs along Calaveras Fault zone near north shore of reservoir
Franciscan Complex, Blueschist Block, and Serpentinized Ultramafic Rocks[2]	Fsp, Fb, Fm, KJfm, fm, bl, Jsp	Jurassic-Cretaceous	Serpentinite is generally weathered, weak, intensely sheared, waxy rock, occurs south and west of the existing dam between Spillway and Gully Faults; Blueschist is hard, strong, foliated to massive amphibolite schist, occurs primarily in Calaveras Creek north of the existing dam; Mélange is intensely sheared, with a weak shale matrix containing various sized blocks of greywacke sandstone, siltstone, shale, siliceous schist, serpentinite, blueschist,

Geologic Unit	Map Symbol[1]	Age	Lithology ~~and Occurrence~~
			and igneous rocks, occurs throughout the right abutment
Eylar Mountain terrane[2]	KJfe	Jurassic-Cretaceous	Sheared and metamorphosed mudstone, siltstone, graywacke, conglomerate, and chert
Yolla Bolly terrane[2]	fy2, fys	Jurassic-Cretaceous	Metagraywacke, slaty mudstone, and conglomerate.

Notes:

[1] Map symbols are keyed to the map shown in Figures 4.8.1a and 4.8.1b.

[2] Franciscan Complex is known to contain naturally occurring asbestos associated with serpentinite and amphibolite schist, which is discussed in Section 4.9, Hazards and Hazardous Materials, and rocks of the Yolla Bolly and Eylar Mountain terrane may also contain naturally occurring asbestos.

Sources: URS 2005b~~.~~; Wentworth et al. 1998; Graymer et al. 1996

The first sentence of the last paragraph on EIR page 4.8-24 is revised as follows to address updated geologic information:

> Excavation at Borrow Area E at the south end of the Calaveras Reservoir would remove sandy to silty lean clay with gravel from the older alluvial deposits.

The following reference is added to the top of EIR page 4.8-37, before the reference to Tinsley, J.C., Youd, T.L. Perkins, D.M., and Chen, A.T.F, 1985, to include base data used in the preparation of revised Figure 4.8-1:

> Society of Vertebrate Paleontology, *Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines*, Society of Vertebrate Paleontology News Bulletin, vol. 163, p. 22-27, 1995.

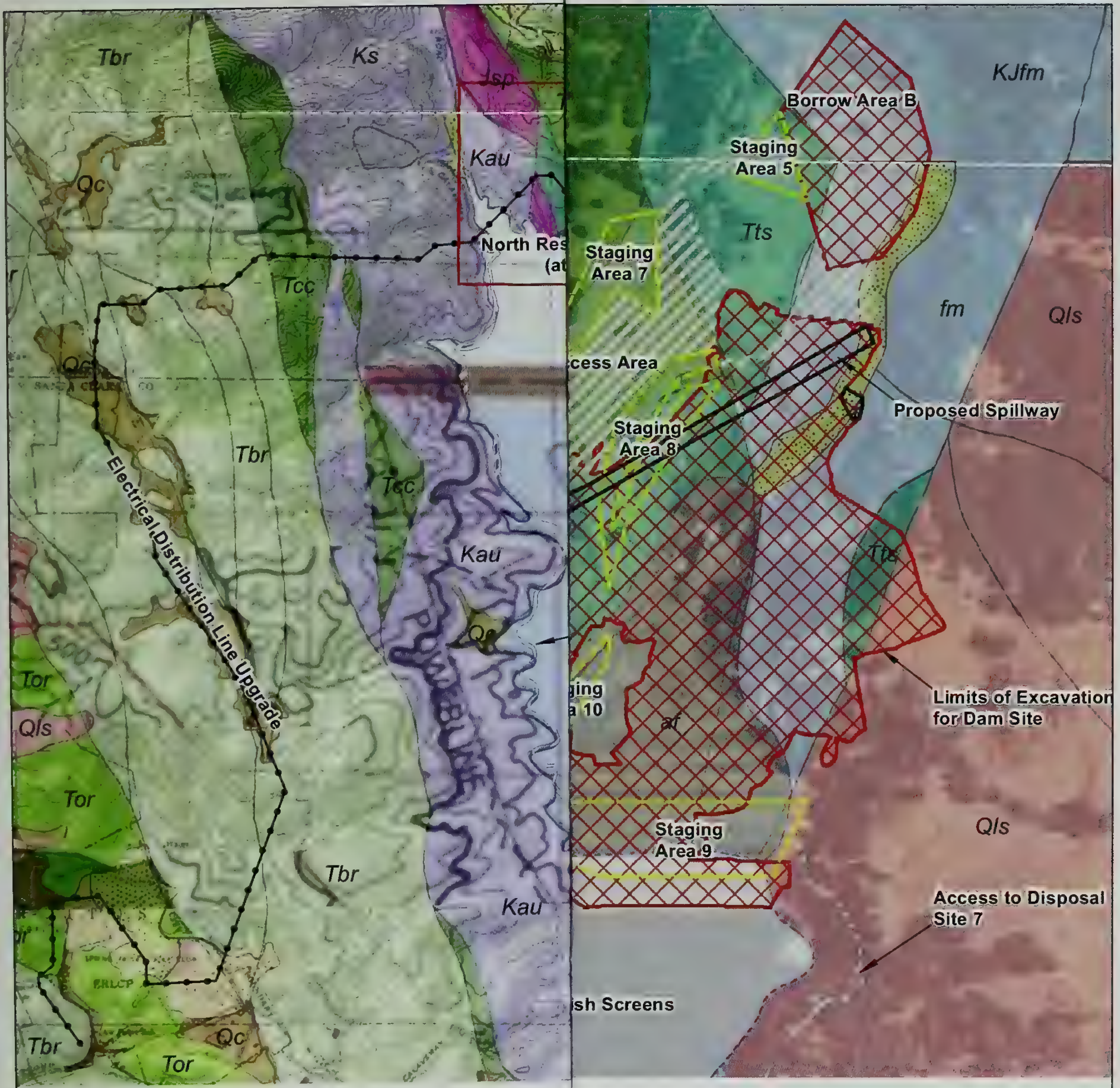
The following reference is added to the top of EIR page 4.8-38, before the reference to William Lettis & Associates 2004, to include base data used in the preparation of revised Figure 4.8-1:

> Wentworth, C. M., M.C. Blake, R.J. McLaughlin, and R.W. Graymer, 1998. *Preliminary Geologic Map of the San Jose 30 x 60-Minute Quadrangle, California*, Open-File Report 98-795.

Section 4.9, Hazards and Hazardous Materials

The summary statement for Impact 4.9.4 on EIR page 4.9-20 (part of Table 4.9.2) and on EIR page 4.9-26 is revised as follows:

> Impact 4.9.4: Increased risk of fires ~~during construction~~ in an area of high fire danger.


Tbr
Ks
Jsp
Kau
Qc
North Res
(at
Tcc
SANTA CLARA CO
Qc
Tbr
Electrical Distribution Line Upgrade
Tcc
Kau
Qc
500
Tor
Qls
Tor
Tbr
Kau
Tbr
Qc
Tor
Staging Area 7
cess Area
Staging Area 8
ging a 10
af
Staging Area 9
ish Screens
Borrow Area B
KJfm
Staging Area 5
Tts
fm
Qls
Proposed Spillway
Tts
Limits of Excavation for Dam Site
Qls
Access to Disposal Site 7

Project Areas

- ▨ Dam Site Excavation and Borrow Areas
- ▭ Staging Areas
- ░ Access Areas and Roads
- ⬚ Disposal Sites

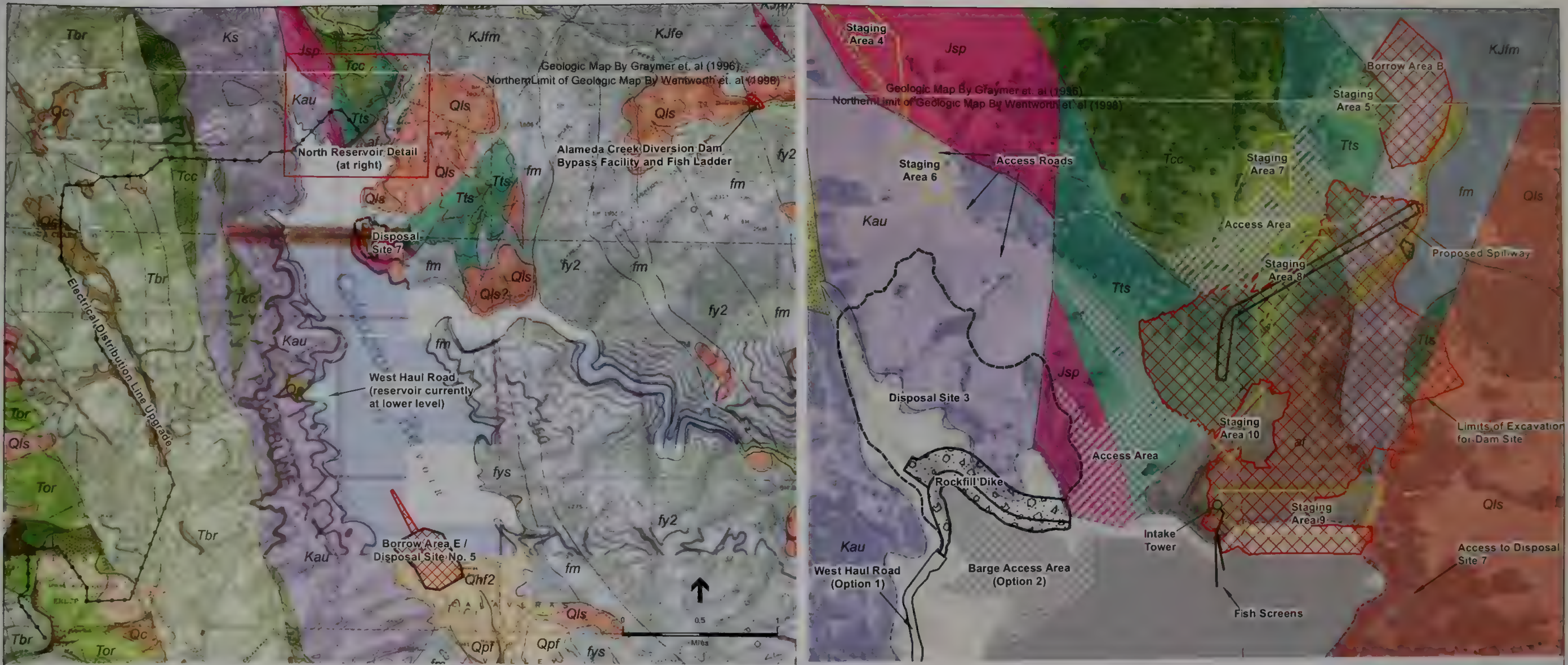
Ge	Paleontological Resource Potential
Miocene)	High
ocene)	High
a Formation (Cretaceous)	Low
, Yolla Bolly Terrane, and eous & Jurassic) ap)	Low
retaceous and Jurassic)	Low
c)	Low

SOURCE: ESRI, 2010; Wentworth et. al, 1998; Graymer et al, 1996; ESA + Orion, 2010

CALAVERAS DAM REPLACEMENT PROJECT

2005.0161E

FIGURE 4.8.1b: REGIONAL GEOLOGY AND ALEONTOLOGICAL RESOURCE POTENTIAL


Tor
Ks
Jsp
Tcc
KJfm
KJfe
Kau
Tts
Qls
Qc
Geologic Map By Graymer et. al (1996)
Northern Limit of Geologic Map By Wentworth et. al (1998)
North Reservoir Detail (at right)
Alameda Creek Diversion Dam Bypass Facility and Fish Ladder
fy2
fm
Disposal Site 7
Qls?
Tbr
Electrical Distribution Line Upgrade
West Haul Road (reservoir currently at lower level)
fys
Borrow Area E / Disposal Site No. 5
Qhf2
Qpf
0
0.5
1
Miles
Staging Area 4
Borrow Area B
Staging Area 5
Staging Area 6
Access Roads
Staging Area 7
Access Area
Proposed Spillway
Staging Area 8
Disposal Site 3
Staging Area 10
Limits of Excavation for Dam Site
Access Area
Rockfill Dike
Staging Area 9
Intake Tower
Access to Disposal Site 7
West Haul Road (Option 1)
Barge Access Area (Option 2)
Fish Screens

Project Areas

- ▨ Dam Site Excavation and Borrow Areas
- Staging Areas
- Access Areas and Roads
- ☐ Disposal Sites

Geologic Units (in order of increasing age)	Paleontological Resource Potential
af, Artificial fill (Modern)	Low
Qa, Qha; Alluvium, undivided (Holocene)	Low
Qpa, Qhf2, Qpf, Older alluvium (early Holocene & Pleistocene)	High
Qc, Colluvium (Quaternary, undivided)	Source-Dependant
Qls, Landslide deposits (Quaternary, undivided)	Source-Dependant
Tbr, Briones Formation (upper Miocene)	High
Tor, Orinda Formation (upper Miocene)	High

Geologic Units (in order of increasing age)	Paleontological Resource Potential
Tcc, Claremont Formation (upper to middle Miocene)	High
Tts, Temblor Sandstone (upper to middle Miocene)	High
Kau, Ks; Sedimentary rocks of the Berryessa Formation (Cretaceous)	Low
fy2, fys, KJfe, KJfm, fm; Franciscan Melange, Yolla Bolly Terrane, and Eylar Mountain Terrane of Crawford (Cretaceous & Jurassic) (nomenclature is dependent on source map)	Low
bl, Blueschist block, Franciscan blueschist (Cretaceous and Jurassic)	Low
Jsp, Serpentinized Ultramafic Rocks (Jurassic)	Low

SOURCE ESRI, 2010; Wentworth et. al, 1998; Graymer et al, 1996, ESA + Orion, 2010

FIGURE 4.8.1b: REGIONAL GEOLOGY AND PALEONTOLOGICAL RESOURCE POTENTIAL

The summary statement for Impact 4.9.6 on page 4.9-20 (part of Table 4.9.2) and on page 4.9-29 is revised as follows:

> Impact 4.9.6: Release of fuel and other hazardous materials to the environment, including Calaveras Reservoir~~, during construction~~.

Section 4.10, Cultural Resources

The second sentence of the third paragraph under Subsection 4.10.1.1, Study Area, on EIR page 4.10-2 is revised as follows:

> These areas are among the ~~four~~ five Biological Mitigation Areas that have been identified as suitable potential locations within which habitat restoration efforts to mitigate the CDRP's adverse impacts on biological resources are proposed. Cultural resource surveys were conducted for these mitigation areas, and are described on EIR Section 5.4, "Impacts of Implementing Proposed Mitigation," p. 5-16.

Staff-initiated text changes to Draft EIR Section 5.4, page 5-16, Impacts of Implementing Proposed Mitigation, begin on EIR page 12-138. These changes update the surveys to include the Koopmann Road Mitigation Area.

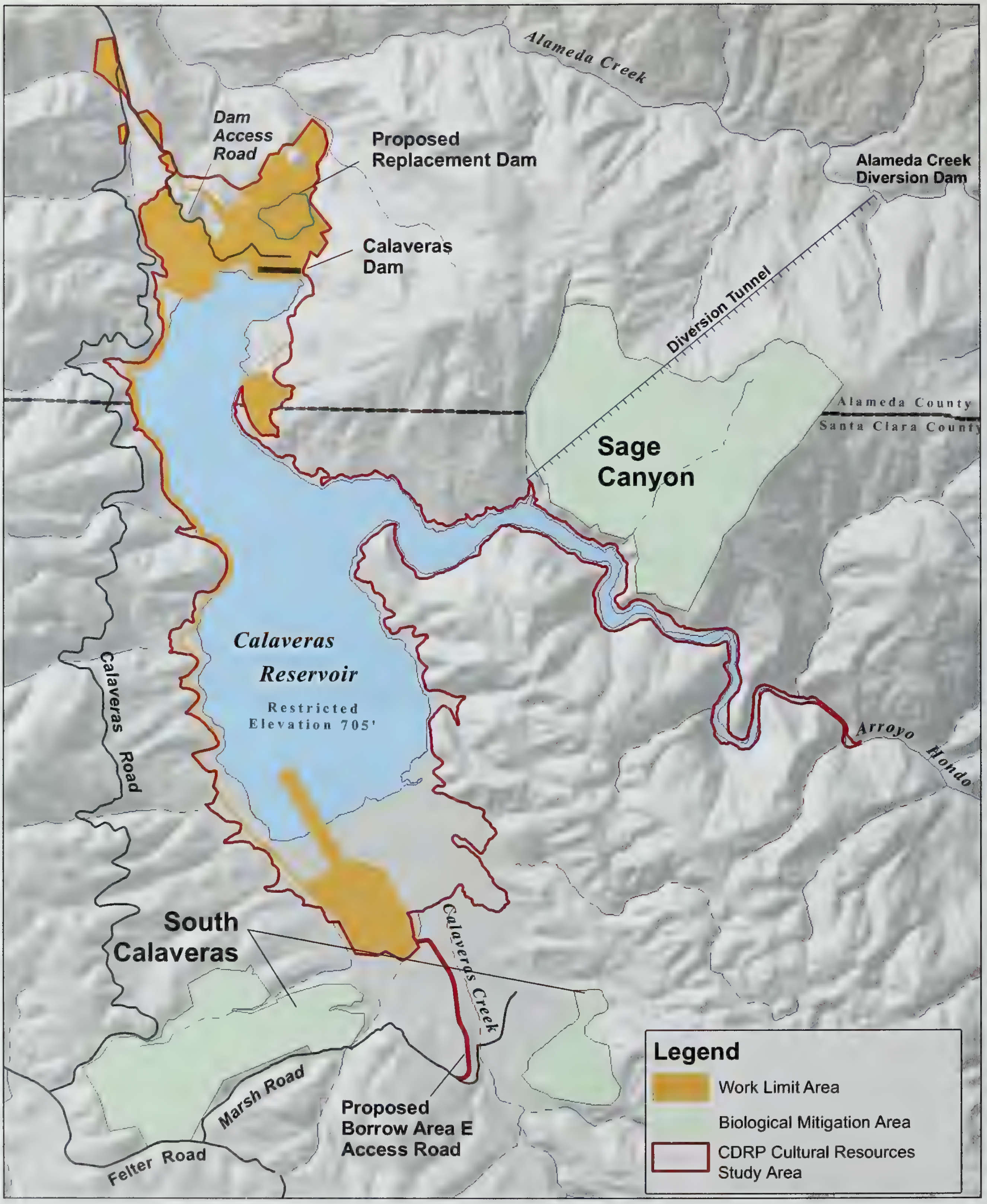
Figure 4.10.1: Cultural Resources Study Area and Work Limit Area, on EIR page 4.10-3, is updated to show the revised South Calaveras Mitigation Area boundary (the Koopmann Road Mitigation Area is not on this figure but is detailed in Appendix C.3). The revised figure is shown on the following page.

The text in the third paragraph in Section 4.10.1.1, Study Area, on page 4.10-2, is clarified as follows:

> Also shown on Figure 4.10.1 are two Biological Mitigation Areas (South Calaveras and Sage Canyon) that are adjacent to the Study Area. These areas are among the ~~four~~ five Biological Mitigation Areas that have been identified as suitable potential locations within which habitat restoration efforts to mitigate the CDRP's adverse impacts on biological resources are proposed. The other three, San Antonio, Goat Rock, and Koopmann Road, are beyond the area shown in Figure 4.10.1, and are discussed in Section 4.4, Vegetation and Wildlife on pp. 4.4-73 – 4.4.74. All five mitigation areas have been surveyed for cultural resources as part of the analysis for the EIR.

The "Paleontology" section on EIR pages 4.10-5 – 4.10-6 is modified as follows to provide further information on the location and extent of potentially fossil-bearing geologic units:

> The project vicinity is within a geologic locality where the probability for the presence of paleontological resources is high. ~~Summary information is provided here to provide a context for discussion of potential impacts on paleontological resources in the Study Area.~~ Much of ~~T~~the region is underlain by ~~marine sedimentary rocks, including the Panoche Formation, Monterey Formation, and other fossil-bearing,~~ marine and non-marine ~~sandstone, siltstone, or gravel deposits~~ sedimentary rocks ranging in age from 10,000 to about 25 ~~5.3~~ million years old (Wentworth et. al 1998). Fossil localities within these rock units have been identified in the Sunol Valley and surrounding area (UCMP


Alameda Creek
Dam Access Road
Proposed Replacement Dam
Alameda Creek Diversion Dam
Calaveras Dam
Diversion Tunnel
Alameda County
Santa Clara County
Sage Canyon
Calaveras Reservoir
Restricted Elevation 705'
Calaveras Road
Arroyo Hondo
South Calaveras
Calaveras Creek
Marsh Road
Felter Road
Proposed Borrow Area E Access Road
Legend
Work Limit Area
Biological Mitigation Area
CDRP Cultural Resources Study Area
N
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1
MILE

SOURCE: URS

FIGURE 4.10.1: CULTURAL RESOURCES STUDY AREA AND WORK LIMIT AREA (REVISED)

2006). The majority of the fossils found in the region are vertebrate fossils of the Pleistocene epoch found in sediments, including extinct bison, camels, ~~boney fish,~~ mammoths, and horses, although some localities in pre-Pleistocene sedimentary rocks contain marine invertebrate fossils such as bivalves (clams). A fossil of a mastodon from the Pleistocene epoch was discovered in Sunol, while an unidentified vertebrate fossil was discovered in the vicinity of Calaveras Dam (UCMP 2006).

~~The distribution of fossil localities and the location of corresponding geologic units indicate that most of the paleontological resources in the region are east and south of Interstate 680 (I-680) in the upland foothills of the Diablo Range. Fossil localities diminish west of I-680, towards the Santa Clara Valley, because the Santa Clara Valley and the south San Francisco Bay margin is underlain by much younger alluvial and basin deposits that do not contain abundant fossil remains. There are 280 fossil localities in Alameda County, but only 36 in Santa Clara County (UCMP 2006). Some of the fossil localities in Santa Clara County contain vertebrate fossils, including a bison and another mammal that appears to be an ancient descendant of an elephant or sea cow.~~

As illustrated in Figure 4.8-1b: Regional Geology and Paleontological Resource Potential, in Section 4.8, Geology, Soils, and Seismicity, bedrock units within the project boundaries include metamorphosed bedrock of the Franciscan Complex and Yolla Bolly and Eylar Mountain terranes (*KJfm, fm, fy2, fys, KJfe*) and serpentinized ultramafic rocks (*Jsp*) as well as sedimentary bedrock of the Claremont Formation (*Tcc*), Temblor Sandstone (*Tts*), Berryessa Formation (*Kau*), Briones Formation (*Tbr*), and Orinda Formation (*Tor*). Unconsolidated units present within the project area include alluvium (*Qa, Qha*), older alluvium (*Qpa, Qhf2,Qpf*), colluvium (*Qc*), landslide deposits (*Qls*), and artificial fill materials (*af*). These figures also provide information on the paleontological potential of each of these rock units, determined based on the following criteria, which are consistent with Society of Vertebrate Paleontology Guidance (SVP 1995):

- *High Potential.* Rock units (or formations) in which vertebrate or significant invertebrate fossils have been found. These rock units usually include sedimentary and some volcanic formations that contain significant fossil resources *anywhere within their geographic extent* and sedimentary deposits formed in a time period or composed of materials suitable for the preservation of fossils.
- *Low Potential.* Rock units that have few, if any, records of vertebrate fossils in institutional collections, or that have been shown in surveys or paleontological literature to be largely absent of fossil resources. Low-potential rocks also include metamorphic and most volcanic rocks.

Sources of information consulted to determine the paleontological potential of a rock unit include the University of California Museum of Paleontology collections database and geologic unit descriptions in regional geologic maps. Areas of high paleontological resource potential are restricted to undisturbed Pleistocene and Miocene age sedimentary rocks in the project area, which include older alluvium (early Holocene- and Pleistocene-age), the Claremont Formation the Temblor Sandstone, the Briones Formation, and the Orinda Formation. The Temblor Sandstone, in particular, has yielded numerous vertebrate fossils in other regions of California. Landslide deposits and colluvium are derived from other rock units, therefore the paleontological potential of these units is dependent on the rock type they were derived from as indicated in Figure 4.8.1b.

Project activity areas that would be located partially or wholly in units of high potential for paleontological resources include:

- Left Abutment Core and Shell Foundation Trench
- Right Dam Abutment Excavation
- Stilling Basin cut slope above elevation of approximately 780 feet
- Cut slope above spillway discharge channel
- Borrow Area B, top formation above elevation of approximately 780 feet
- Borrow Area E/Disposal Site 5
- Staging Areas 5, 7, and 8
- Electrical Distribution Line Upgrade

All other project facilities would be located in units of low paleontological sensitivity, which include artificial fill, Holocene alluvium, the Berryessa Formation, and rocks of the Franciscan Complex and Yolla Bolly and Eylar Mountain terranes. Despite the wide distribution and great thickness of the Franciscan Complex and Yolla Bolly and Eylar Mountain terrane rocks in Northern California, vertebrate fossils in these units are rare. The Berryessa Formation, primarily located along the west rim of the reservoir, is a Cretaceous mudstone of the Great Valley Sequence that has not yielded vertebrate fossils in the UCMP collection. Finally, recent alluvium (Holocene) is too young to have stiffened and fossilized animal or plant remains.

The summary statement for Impact 4.10.5 on EIR page 4.10-51 (part of Table 4.10.1) is revised as follows:

Impact 4.10.5: Construction impacts on ~~unknown~~ paleontological resources.

Impact 4.10-5, on EIR pages 4.10-54 – 4.10-55, is revised as follows to clarify which construction activities could result in the disruption of paleontological resources and reflect an updated mitigation approach:

Impact 4.10.5: Construction impacts on ~~unknown~~ paleontological resources.

The Study Area is within a geologic locality where there is a high probability of encountering ~~unknown~~ paleontological resources during ground-disturbing construction activities such as excavation for the ~~spillway, excavation of borrow areas, and construction of haul roads~~ Left Abutment Core and Shell Foundation Trench; Right Dam Abutment; Stilling Basin cut slope, above an elevation of approximately 780 feet; cut slope above Spillway Discharge Channel; the top formation of Borrow Area B, above an elevation of approximately 780 feet; Borrow Area E/Disposal Site 5; and Staging Areas 5, 7, and 8. Disruption of paleontological resources during project construction could impair the potential of such resources to yield important scientific information by destroying the resource and its association with other resources, or its stratigraphic association that could establish the age of the resource.

Impact Conclusion

Construction of the project could have a significant adverse impact on ~~significant unknown~~ paleontological resources. Mitigation Measure 5.10.5 establishes procedures to address potential impacts on ~~unknown~~ paleontological resources during ground-disturbing construction activities. ~~These~~ This mitigation measure~~s~~ requires paleontological resources training for construction forepersons and field supervisors and a literature review and reconnaissance-level field assessment to evaluate the potential for paleontological resources to be present in areas where excavation would occur at a greater level of detail. Requirements for avoidance and/or salvage are also specified, should these assessments identify the potential for impacts on significant paleontological resources. Depending on the results of these assessments, monitoring may also be required during soil disturbing activities.~~, identification of sensitive paleontological areas and detailed surveys of such areas, as well as monitoring and potential recovery treatment of unknown paleontological discoveries, as appropriate~~. These measures would be applicable to portions of the Study Area~~,~~ where ground disturbing construction activities would occur in rock units with a high potential for paleontological resources. Implementation of this mitigation measure would identify and preserve the scientific information potential of paleontological resources, and thereby reduce potential impacts of construction on ~~unknown~~ paleontological resources to a less-than-significant level.

The following source is deleted from the bottom of EIR page 4.10-57:

~~Additional Sources Consulted~~

~~Adrian Praetzellis, Ph.D., Professor of Anthropology, Sonoma State University, Rohnert Park, CA, Review of the CDRP EIR Draft Cultural Resources Section, April 2009.~~

Section 4.11, Visual Resources

The first paragraph under Impact 4.11.4 on page 4.11-23 is revised as follows:

Impact 4.11.4: Impact of construction activities and site disturbance on scenic views from county roads.

As described in Subsection 3.5.1.7, Access and Roads, in Chapter 3, Project Description, the southern segment of Calaveras Road (between Geary Road and Felter Road) would be closed to the public on weekdays for hauling of imported materials (approximately 2 months in the summer of 2011, and 18 months beginning in the winter of 2012~~) and may also be closed on other days outside of these periods when air quality monitoring indicates unacceptable levels of dust~~. This segment of Calaveras Road would be open on weekdays and all major holidays, which are typically peak periods for recreationalists.

Section 4.12, Transportation and Circulation

The last paragraph on page 4.12-7 which continues on page 4.12-8 is revised as follows:

Sand and gravel for use as filter and drain materials in the replacement dam would be delivered from off-site commercial sources to the replacement dam site via Calaveras Road during a 2-month period in summer 2011 and for an approximately 18-month period beginning in winter 2012. As further discussed below, Mitigation Measure

> 5.12.4b requires the SFPUC to seek permission from Alameda County to close the section of Calaveras Road between a point immediately south of the intersection with Geary Road and a point near the Santa Clara County line (south of the dam access road) to through-traffic, Monday through Friday, except for emergency vehicles, during the delivery of these materials to avoid potential traffic safety hazards (see Figure 4.12.1). In addition, the SFPUC would request permission from Santa Clara County to close the portion of the road between the Alameda County line and Felter Road during the same two periods; the purpose of this additional measure would be to prevent vehicles that may enter Calaveras Road from the south from needing to turn around at a dead end at the Alameda County line. ~~The SFPUC may also need to request permission to close this section of Calaveras Road in both Alameda and Santa Clara Counties at other times, including weekend days, as a precaution when air quality monitoring indicates levels of dust at the perimeter of the work area exceeds desired levels (see Section 4.9, Hazards and Hazardous Materials for further discussion).~~ The closed portion of Calaveras Road would be swept clean ~~on either Friday evening or~~ before 6:00 am Saturday morning, and re-opened for traffic on Saturday and Sunday. This segment of Calaveras Road would be open on all major ~~state and national~~ holidays.

Section 4.13, Air Quality

The second and third sentences in the first paragraph on EIR page 4.13-1 text are revised as follows:

> This section summarizes applicable regulations and existing air quality conditions and analyzes potential temporary, short-term, and long-term air quality impacts of the proposed project. The analysis method for temporary and short-term construction, long-term regional (operational), local mobile source, odor, ~~and~~ toxic air contaminant (TAC), and greenhouse gases (GHG) emissions is consistent with the ~~recommendations~~ guidelines of the Bay Area Air Quality Management District (BAAQMD). Information and associated impact analysis regarding naturally occurring asbestos (NOA) and naturally occurring metals-containing materials at the project site ~~is~~ are presented in Section 4.9, Hazards and Hazardous Materials.

The first full paragraph on EIR page 4.13-3 is revised as follows:

> Portions of the project area are located within ~~a~~ geologic formations known to contain ~~sources of~~ NOA. Existing background ~~air~~ concentrations of airborne NOA are expected in the vicinity of the project site. A discussion of the potential to encounter NOA ~~existing conditions~~ and provisions proposed to address the ~~potential~~ presence of NOA and metals in fugitive dust ~~is~~ are presented in Section 4.9, Hazards and Hazardous Materials, of this Environmental Impact Report (EIR).

The following changes are made to the four paragraphs under the subheading "Naturally Occurring Asbestos" on EIR page 4.13-13 and a new footnote is added:

> Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. NOA, which the CARB identified as a TAC in 1986, is found in many parts of California and commonly associated with serpentine rock (serpentinite) and other ultramafic rocks.[1]

> As discussed in Section 4.~~8~~9, Hazards and Hazardous Materials~~Geology, Soils, and Seismicity~~, Franciscan ~~S~~serpentinite and ~~M~~mélange are rock types known to contain small amounts of chrysotile and amphibole asbestos. These rocks are mapped within the Calaveras fault zone, on the western side of Observation Hill, beneath the Calaveras Creek channel downstream of the existing dam, at the right abutment of the existing dam, and on the hillside to the east (URS 2005, Figures 4A–4D). Chrysotile and amphibole asbestos are ~~is a~~ NOA minerals that can be a human health hazard if ~~it~~ they become~~s~~ airborne. The other serpentine minerals found in serpentinite do not form fibrous crystals and are not asbestos minerals.
>
> The source of the fill materials historically used in the construction of the existing dam is not well described. However, a large portion of the fill was obtained from the quarry on the southwest face of Observation Hill (Elliot 1916) in an area mapped as Franciscan Complex ~~M~~mélange and Franciscan Complex ~~S~~serpentinite (URS 2005, Figures 4A–4D). In addition, some fill was probably obtained from materials in the vicinity of the right dam abutment where mélange is mapped. Thus, rocks containing NOA are probably present in the earth and rockfill of the existing dam.
>
> Exposure to airborne asbestos and naturally occurring metals poses a potential health hazard. The issues related to NOA and naturally occurring metals-containing materials at the project site are addressed in Section 4.9, Hazards and Hazardous Materials.

The new footnote for this text change is shown below, and subsequent footnotes in the section will be renumbered accordingly:

> [1] Ultramafic rocks are formed in high temperature environments well below the surface of the earth.

The first sentence in the last paragraph under the subheading "Emissions Sources and Inventory" on EIR page 4.13-15 is revised as follows"

> California is the 12th to 16th largest emitter of CO_2 in the world (CEC 2006), producing 499 million gross metric tons of CO_2 equivalent (CO_2e) in 2004 (a metric ton equals 1,000 kilograms or 2,205 lbs).

The second paragraph under the subheading "Local and Regional Regulations" on EIR page 4.13-18 is revised and separated into two paragraphs, as shown below:

> In 1999, the BAAQMD released *BAAQMD CEQA Guidelines* (BAAQMD 1999), an ~~updated~~ advisory document for lead agencies, consultants, and project applicants regarding uniform procedures for addressing air quality in California Environmental Quality Act (CEQA) documents~~.~~, and as of October 2009 (the publication date of the Draft EIR), the BAAQMD was in the process of updating those guidelines and had proposed preliminary quantitative thresholds of significance for construction-related emissions. On June 2, 2010, the BAAQMD adopted Air Quality CEQA Thresholds of Significance contained in the report entitled *California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2010a). The adopted thresholds identify quantitative values for construction- and operational-related emissions of criteria air pollutants and precursors as well as for risk and hazards (i.e., TACs); these thresholds supersede guidance provided in the 1999 BAAQMD Guidelines. The BAAQMD's adopted 2010

> CEQA Thresholds of Significance also identify thresholds for operational GHG emissions but none for construction GHG emissions.
>
> The BAAQMD's June 2010 CEQA Guidelines also recommend analytical methodologies and mitigation measures for local agencies to use when preparing air quality impact analyses under CEQA. The updated *CEQA Guidelines* address new health protective air quality standards, exposure to TACs, and adverse effects from global climate change. Related to the 2010 CEQA Guidelines, the BAAQMD is currently working with the City and County of San Francisco to develop a community risk reduction plan that would allow a comprehensive, community-wide approach to reducing local air pollution emissions and exposures. This plan may assist with CEQA compliance by supporting a programmatic approach to reducing local air quality impacts as provided for under the adopted CEQA thresholds of significance for local risks and hazards.
>
> Both ~~The~~ the 1999 *BAAQMD CEQA Guidelines* and the 2010 *California Environmental Quality Act Air Quality Guidelines* contain the following applicable elements:

The second full paragraph on EIR page 4.13.-20 is deleted, as shown below:

> ~~As of the date of this Draft EIR, the BAAQMD has not adopted quantitative thresholds of significance for construction-related emissions. However, the BAAQMD is developing quantitative CEQA significance thresholds for construction-related emissions of criteria pollutants, precursors, TACs, and GHGs (BAAQMD 2009). The BAAQMD expects to adopt these new thresholds of significance later this year.~~

The following text is added to the sixth sentence in the first paragraph under the subheading "Toxic Air Contaminants" on EIR page 4.13-20:

> These, in conjunction with additional rules set forth by the BAAQMD under the 2010 adopted CEQA Thresholds of Significance, establish the regulatory framework for TACs.

Text is added to the first sentence and text is corrected in the second sentence in the last paragraph under the subheading "State and Local Toxic Air Contaminant Programs" on EIR page 4.13-21, as follows:

> The CARB has adopted diesel-exhaust control measures and stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators); as of October 2010, the CARB is proposing amendments to these regulations that would extend the deadlines and prove more flexible options for compliance. Upcoming milestones include the low-sulfur diesel fuel requirement and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) ~~nationwide~~ statewide.

The second sentence in the last paragraph on EIR page 4.13.-22 is revised as shown below:

> If it is determined that the project's emissions would exceed the BAAQMD's threshold of significance for TACs, ~~as identified below,~~ the source has to implement the best available control technology for TACs (T-BACT) to reduce emissions.

The following sentence is added to the end of the first paragraph on EIR page 4.13-24:

> EPA later granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks and sport utility vehicles on June 30, 2009.

The following sentence is added to the end of the first paragraph on EIR page 4.13-26:

> As described below in the discussion of Assembly Bill 32, OPR and the Resources Agency met these schedule milestones.

The third paragraph under the subheading "Assembly Bill 32 Scoping Plan, Draft Recommended Approaches, Draft CEQA Guidelines" on EIR page 4.13-26 is revised and expanded, as shown below:

> On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the State CEQA Guidelines for GHG emissions, as required by SB 97. These ~~proposed~~ amendments, which were adopted December 30, 2009 and became effective March 18, 2010, ~~would~~ provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. ~~The Natural Resources Agency will formally provide notice and accept public comments in 2009, prior to certifying and adopting the amendments, as required by SB 97.~~ Section 15064.4 was added to the CEQA Guidelines entitled, *Determining the Significance of Impacts from Greenhouse Gas Emissions*. This section requires that the lead agency make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. The lead agency may use a model or methodology to quantify GHG emissions resulting from a project, or may rely on a qualitative analysis or performance-based standards. The lead agency should consider the extent of the impact of project-related GHG emissions as compared to the existing environmental setting, whether project emissions exceed a threshold of significance that the lead agency determines applies to the project, and the extent to which the project complies with requirements to reduce or mitigate GHG emissions.

The first paragraph under the heading "Approach to Analysis" on EIR page 4.13-31 is revised as follows:

> As stated in Appendix G of the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. At the time of publication of the Draft EIR, the BAAQMD's 1999 Guidelines (BAAQMD 1999) were in effect. Subsequent to the publication of the Draft EIR, the BAAQMD adopted new CEQA thresholds of significance (BAAQMD 2010a). It is BAAQMD policy that the adopted thresholds apply to projects for which a Notice of Preparation (NOP) is published or environmental analysis begins on or after these applicable effective dates. Since the NOP for the proposed project was published October 24, 2005 and environmental analysis began prior to June 2, 2010, the thresholds do not apply. Nevertheless, the analysis of air quality impacts for the proposed project, provided below, is performed using both the 1999 Guidelines and the 2010 Guidelines.

> Thus, as identified by the BAAQMD's 1999 ~~g~~Guidelines, implementation of the proposed project would result in significant air quality impacts if (BAAQMD 1999):

The following text is added after the fifth bullet in the first paragraph under the heading "Approach to Analysis" on EIR page 4.13-31:

> As identified by the BAAQMD's 2010 adopted CEQA thresholds of significance, implementation of the proposed project would result in significant air quality impacts if:
>
> - Best Management Practices for control of fugitive dust are not employed during construction;
> - Average daily construction emissions of ROG or NO_X exceed 54 lb/day;
> - Average daily construction emissions of $PM_{2.5}$ from exhaust exceeds 54 lb/day:
> - Average daily construction emissions of PM_{10} from exhaust exceeds 82 lb/day;
> - Average daily operational emissions of ROG, NO_X, or $PM_{2.5}$ exceed 54 lb/day, or an annual maximum of 10 tons per year (TPY);
> - Average daily operational emissions of PM_{10} exceed 82 lb/day, or an annual maximum of 15 TPY;
> - Operational emissions of CO exceed 9.0 ppm (8-hour average) or 20.0 ppm (1-hour average);
> - The project does not comply with a Qualified Greenhouse Gas Reduction Strategy or operational GHG emissions exceed 1,100 metric tons of CO_2e per year;
> - The project does not comply with a Qualified Community Risk Reduction Plan, or sensitive receptors are exposed to an increased cancer risk that exceeds 10 chances per million or a Hazard Index that exceeds 1 for non-cancer risk;
> - Sensitive receptors would be exposed to an ambient $PM_{2.5}$ concentration increase of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$) annual average from exhaust;
> - Storage or use of acutely hazardous materials is located near receptors; or
> - Sensitive receptors would be located near an odor source where an average of five confirmed complaints per year occurred over a 3-year period.

The following changes are made to the last sentence of the paragraph starting on EIR page 4.13-31 and continuing to EIR page 4.13-32:

> In accordance with the BAAQMD's approach to CEQA analyses, the determination of significance is based, in part, on the implementation of control measures (BAAQMD 1999 and 2010a).

Text in the second full paragraph on EIR page 4.13-32 is revised as follows:

> Project-generated construction- and operation-related emissions of ~~TACs and~~ odors and long-term emissions of TACs are qualitatively assessed for the potential to expose sensitive receptors to levels that exceed BAAQMD-recommended criteria.

The last paragraph on EIR page 4.13-32 is revised as follows:

> As stated above under “Regulatory Setting,” the BAAQMD had~~ has~~ not adopted quantitative thresholds of significance for construction-related emissions prior to the publication of the Draft EIR~~ at this time~~. However, in June 2010, the BAAQMD adopted ~~is developing~~ quantitative CEQA significance thresholds for construction-related emissions of criteria pollutants, precursors, and TACs~~, and GHGs~~ (BAAQMD 2010a~~2009~~). The BAAQMD did not identify a significance threshold for construction-related GHG emissions in the adopted 2010 thresholds.~~ The BAAQMD expects to adopt these new thresholds of significance later this year. Therefore, in anticipation of the BAAQMD's future adoption of new quantitative significance thresholds for construction-related emissions, this~~ In light of the 1999 significant criteria in effect when the environmental analysis began, and the recently adopted 2010 significance criteria, this ~~Draft~~ EIR ~~also~~ includes a quantitative analysis of the project’s construction-related emissions of criteria air pollutants and precursors based on both the ~~draft~~ 1999 and 2010 BAAQMD significance thresholds and worst-case assumptions regarding the project’s construction emissions.

The last note in Table 4.13.4: Summary of Air Quality Impacts on EIR page 4.13-33 is revised as follows:

> * SU Impact applies only under the 2010 ~~newly proposed~~ BAAQMD construction emissions CEQA thresholds of significance.

The last sentence of the second full paragraph on EIR page 4.13-34 is revised as follows:

> Consequently, as of the date of publication of the Draft EIR, the BAAQMD had~~has~~ not adopted mass emission thresholds for construction-related emissions of ROG and NO_X and based~~s~~ its determination of significance on consideration of the fugitive PM_{10} dust control measures to be implemented (BAAQMD 1999).

The first sentence of the last paragraph on EIR page 4.13-34 is revised as follows:

> The BAAQMD’s 1999 guidelines approach to CEQA analyses of construction-related fugitive PM_{10} dust emissions is to require implementation of effective, comprehensive control measures rather than a detailed quantification of construction emissions.

The following changes are made to the second sentence of the last paragraph on EIR page 4.13-34 is revised:

> The BAAQMD required~~s~~ that all feasible control measures, which are dependent on the size of the construction area and the nature of the activities involved, shall be incorporated into project design and implemented during project construction.

The last sentence of the last paragraph on EIR page 4.13-34 is revised as follows:

> Thus, using the 1999 guidelines, project-generated, construction-related emissions of criteria air pollutants and precursors could violate or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the region’s non-attainment status.

The first sentence of the second paragraph on EIR page 4.13-35 is revised as follows:

> The 1999 BAAQMD CEQA guidelines consider~~s~~ construction-related emissions from all projects in this region to be mitigated to a less-than-significant level if BAAQMD-recommended fugitive PM_{10} dust controls (e.g., watering, sweeping, and stabilizing) and equipment exhaust emission controls (e.g., use of grid power, reduction of idling, and low-emissions tuning up of equipment), outlined in Mitigation Measures 5.13.1a and 5.13.1b, respectively, are implemented. Therefore, ~~it is expected that~~ implementation of applicable BAAQMD dust and exhaust control measures (Measures 5.13.1a, 5.13.1b, and 5.9.2a for NOA [refer to Section 4.9, Hazards and Hazardous Materials, for NOA and naturally occurring metals-related measures]) would reduce this impact to a less-than-significant level based on the 1999 guidelines.

The first and second sentences in the second paragraph on EIR page 4.13-35 are revised as follows:

> As stated above, the Calaveras Dam Replacement Project (CDRP) construction-related emissions would be less than significant with mitigation in accordance with the ~~current~~ 1999 *BAAQMD CEQA Guidelines* in effect at the time ~~of this~~ the Draft EIR was prepared, which do not require quantification of construction-related emissions. However, ~~in anticipation of the future implementation of proposed new BAAQMD CEQA quantitative thresholds of significance for construction-related emissions~~, this ~~Draft~~ EIR also provides a quantitative analysis of the project's construction emissions as required under the adopted 2010 BAAQMD CEQA thresholds of significance for construction-related emissions to determine whether they would exceed the ~~proposed~~ 2010 adopted thresholds.

The third sentence in the last paragraph on EIR page 4.13-35 is revised as follows:

> The modeling results indicate that implementation of the proposed project with mitigation would result in worst-case construction-related emissions of approximately 81 lb/day and 11 TPY of ROG, 394 lb/day and 52 TPY of NO_X, 399 lb/day and 53 TPY of CO, 1 lb/day and 0 TPY of SO_2, 1,672 lb/day and 169 TPY of PM_{10}, and 1,538~~18~~ lb/day and 156~~3~~ TPY of $PM_{2.5}$ (results reported in text are rounded).

Table 4.13.5: Summary of Modeled Worst-Case Construction-Related Criteria Air Pollutant, Ozone Precursor, and Greenhouse Gas Emissions, on EIR page 4.13-36 is updated. The revised table is shown below.

The first sentence in the paragraph on EIR page 4.13-36 is revised as follows:

> These worst-case emissions assume that the activities that overlap according to the anticipated construction schedule would occur simultaneously and that all material transport on- and off-site would involve use of heavy-duty trucks.

The third, fourth, and fifth sentences in the paragraph that starts on EIR page 4.13-36, which continues on EIR page 4.13-37, are revised as follows:

> If this option were used, the construction-related, off-road heavy-duty truck emissions (e.g., exhaust and fugitive dust emissions from travel on unpaved roads) associated with using Borrow Area E (i.e., 81 lb/day and 11 TPY of ROG, 394 lb/day and 52 TPY of

(Revised) Table 4.13.5: Summary of Modeled Worst-Case Construction-Related Criteria Air Pollutant, Ozone Precursor, and Greenhouse Gas Emissions

Source	Emissions (lb/day) [1,2]							Emissions (TPY) [1,2]						
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2e	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2e
Worker Commute Vehicle Exhaust	2.2	2.7	33.5	0.0	0.5	0.0	45,482.2	0.3	0.4	4.4	0.0	0.1	0.0	6,003.6
Off-Site, On-Road Material Delivery Truck Exhaust	3.1	37.9	20.2	0.1	1.5	1.3		0.4	5.0	2.7	0.0	0.2	0.2	
On-Site, Off-Road Heavy-Duty Equipment Exhaust	79.4	441.9	363.2	0.7	26.0	23.9		10.5	58.3	48.0	0.1	3.4	3.2	
Fugitive Dust					~~1,649.8~~ 3,299.6	~~1,517.8~~ 3,035.6	▨					~~166.3~~ 332.5	~~153.0~~ 305.9	▨
Total Emissions	84.7	48~~5~~2.5	~~398.2~~ 416.9	0.8	~~1,672.2~~ 3,327.6	~~1,543.0~~ 3,060.8	45,482.2	11.2	63.7	55.1	0.1	~~169.2~~ 336.2	~~155.6~~ 309.3	6,003.6
Mitigated Emissions	80.7	394.1	398.8	0.8	1,672.2	1,538.0		10.7	52.0	52.6	0.1	169.2	155.6	

Notes: BAAQMD = Bay Area Air Quality Metropolitan District; CARB = California Air Resources Board; CH_4 = methane; CO = carbon monoxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide; NO_X = nitrogen oxides; $PM_{2.5}$ = fine particulate matter; PM_{10} = respirable particulate matter; ROG = reactive organic gases; SFBAAB = San Francisco Bay Area Air Basin; SO_2 = sulfur dioxide; USEPA = U.S. Environmental Protection Agency.

[1] ROG, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions are based on CARB (e.g., EMFAC) and USEPA (i.e., AP-42) emission factors contained in the Construction Emissions Model, Version 5.2 and URBEMIS 8.70, general information provided in the project description, and default model settings and parameters. Assumes use of trucks rather than barges for transport from Borrow Area E.

[2] CO_2e emissions are BAAQMD and California Climate Action Registry factors and account for CO_2, CH_4, and N_2O.

Refer to Appendix G, Air Quality Modeling, for all input assumptions and modeling results.

Source: Data modeled by ETJV, prepared by EDAW in 2009

> NO_X, 399 lb/day and 53 TPY of CO, 1 lb/day and 0 TPY of SO_2, 1,672 lb/day and 169 TPY of PM_{10}, and 1,538~~18~~ lb/day and 156~~3~~ TPY of $PM_{2.5}$.) that are included in the worst-case emissions in Table 4.13.5 would be replaced with barge-related emissions. Specifically, implementing Haul Route Option 2 would result in barge-related emissions of 77 lb/day and 10 TPY of ROG, 621 lb/day and 82 TPY of NO_X, 395 lb/day and 52 TPY of CO, 4 lb/day and 1TPY of SO_2, 854 lb/day and 94 TPY of PM_{10}, and 786~~62~~ lb/day and 87 TPY of $PM_{2.5}$., which would be less than the off-road heavy-duty truck emissions of ROG, CO, PM_{10}, and $PM_{2.5}$ associated with using Borrow Area E. Estimated emissions of NO_X and SO_2 would be higher under Haul Route Option 2.

The first full paragraph on EIR page 4.13-37 is revised as follows:

> In accordance with the BAAQMD ~~draft~~ thresholds of significance for construction-related emissions adopted in June 2010, a project would have a significant impact on air quality if construction-related emissions were to exceed 54 lb/day of ROG or NO_X, ~~547 lb/day of CO, 219 lb/day of SO_2,~~ 54 lb/day of $PM_{2.5}$, or 82 lb/day of PM_{10}. The $PM_{2.5}$ and PM_{10} thresholds apply only to exhaust emissions. Fugitive dust emissions are addressed through implementation of dust control best management practices (BMPs), similar to the approach in the 1999 guidelines. Based on the worst-case analysis above, construction-related emissions would be below the ~~draft~~ 2010 BAAQMD significance thresholds for ~~CO and SO_2~~ PM_{10} and $PM_{2.5}$ exhaust emissions but could exceed the thresholds for ROG~~,~~ and NO_X~~, PM_{10}, and $PM_{2.5}$~~. Implementation of the BAAQMD fugitive dust controls identified in Mitigation Measure 5.13.1a, BAAQMD exhaust controls identified in Mitigation Measure 5.13.1b, and the enhanced dust controls for work in areas containing naturally occurring asbestos under Mitigation Measure 5.9.2a would put the project in compliance with the BMP threshold for fugitive dust control, and fugitive dust emissions would be considered less than significant. ~~reduce PM_{10} and $PM_{2.5}$ emissions by at least 75 percent. However, even with these reductions, construction-related emissions of PM_{10} and $PM_{2.5}$ would likely exceed the draft thresholds of significance of 82 lb/day and 54 lb/day, respectively.~~

The second paragraph on EIR page 4.13-37 is revised as follows:

> Implementing BAAQMD exhaust controls identified in Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b would reduce construction-related emissions of ROG and NO_X by at least 5 percent and 20 percent, respectively. ~~Based on~~ Even with implementation of existing and feasible mitigation strategies, the project's worst-case construction-related emissions of ROG and NO_X~~, PM_{10}, and $PM_{2.5}$~~ cannot be reduced below the adopted 2010 ~~proposed~~ BAAQMD thresholds. To be in compliance with the ~~proposed~~ BAAQMD thresholds adopted in 2010, ROG emissions would need to be further reduced by 33~~5~~ percent~~,~~ and NO_X emissions by 86~~9~~ percent~~, PM_{10} emissions by 98.5 percent, and $PM_{2.5}$ emissions by 98.2 percent~~. At this time, no feasible mitigation exists that would further reduce emissions of ROG~~,~~ and NO_X~~, PM_{10}, and $PM_{2.5}$~~ by these percentages and thus below the adopted ~~proposed~~ BAAQMD thresholds. Therefore, construction-related emissions of ROG~~,~~ and NO_X~~, PM_{10}, and $PM_{2.5}$~~ would have potentially significant and unavoidable impacts on air quality when evaluated in accordance with the ~~proposed~~ adopted 2010 BAAQMD thresholds of significance.

The fifth sentence in the last paragraph on EIR page 4.13-37, which is continued on EIR page 4.13.38, is revised as follows:

> Project-generated emissions of ROG, NO_X, CO, SO_2, PM_{10}, or $PM_{2.5}$would not exceed the BAAQMD's 1999 significance criteria of 15 TPY or 80 lb/day (BAAQMD 1999) or the 2010 criteria of 10 TPY or 54 lb/day for ROG, NO_X, and $PM_{2.5}$; 15 TPY or 82 lb/day for PM_{10}; or 9.0 ppm (8-hour average) or 20.0 ppm (1-hour average) for CO (BAAQMD 2010a).

The first sentence in the third full paragraph on EIR page 4.13-38 is revised as follows:

> To reduce diesel PM emissions during project construction, Mitigation Measure 5.13.1b requires scheduled tune-ups of construction vehicles and equipment to maintain low emissions and limits idling of all ~~non-commuting~~ diesel-fueled construction equipment to 2 minutes~~ vehicles~~ and non-construction diesel vehicles and equipment to a maximum of 5 minutes.

The first sentence in the first full paragraph on EIR page 4.13-39 is revised as follows:

> The HRSA assumed that Haul Route Option 1, the ~~w~~West ~~h~~Haul ~~r~~Road route, would be used because this is the worst-case scenario for diesel PM emissions.

The third sentence in the first full paragraph on EIR page 4.13-39 is revised as follows:

> Emissions from haul trucks restricted to on-site routes were estimated assuming that construction vehicles and equipment would have regularly scheduled tune-ups, idling time for non-~~construction-~~commuting diesel-fueled vehicles and equipment would be limited to 5 minutes, and these haul trucks would be model year 2004 or newer, as required by Mitigation Measures 5.13.1b and 5.13.3b.

The second full paragraph on EIR page 4.13-39 is revised as follows:

> As summarized in Table 4.13-6 below, the results of the HRSA indicate that with the implementation of Mitigation Measures 5.13.3a and 5.13.3b, the potential excess cancer risk from diesel PM emissions at the MEI for the various populations evaluated would be less than the significance threshold of greater than 10.0 in 1 million for cancer risk and that the non-cancer risk would be less than the threshold of Hazard Index 1.0 (ENVIRON 2009).

The fourth sentence in the third full paragraph on EIR page 4.13-39 is revised as follows:

> The results of an HRSA conducted for the watershed keeper's residence on Calaveras Road indicated that the human health risk attributable to exposure to project-generated diesel PM is less than the BAAQMD thresholds of greater than 10.0 in 1 million for cancer risk and 1.0 for the non-cancer Hazard Index.

The following paragraph is inserted after the third full paragraph on EIR page 4.13-39, at the bottom of the page:

> As indicated in Section 4.13.2.2, "Approach to Analysis", the CEQA thresholds adopted by BAAQMD in 2010 include a threshold related to risks and hazards associated with annual average increases in ambient concentrations of $PM_{2.5}$ from exhaust. The estimated

diesel PM concentrations and receptor populations included in the HRSA were used to evaluate project impacts relative to this 2010 criterion. The specific significance threshold used for this EIR is whether sensitive receptors within a 1,000-foot zone of influence from the edge of project construction activities would be exposed to an ambient $PM_{2.5}$ concentration increase of greater than 0.3 $\mu g/m^3$ annual average. In the case of the CDRP, ambient $PM_{2.5}$ concentrations from exhaust would primarily be from diesel PM. Among the receptor populations identified in the HSRA, only the modeled receptors at the watershed keeper's residence in Sunol Valley are located within 1,000-feet of the edge of any construction activities (225 feet east of Calaveras Road where construction traffic will pass by). As indicated in Table 4.13.6 as revised, the annual average diesel $PM_{2.5}$ concentration increase for the modeled receptors would be 0.26 $\mu g/m^3$. This is based on a 0.28 $\mu g/m^3$ concentration for diesel PM_{10} provided in the HSRA, and that diesel $PM_{2.5}$ accounts for approximately 92 percent of diesel PM_{10} particles (i.e., 92 percent of total diesel particulate emissions less than 10 microns in diameter are made of up of particles 2.5 microns in diameter or less). The results of the HSRA assume implementation of Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b; therefore, with implementation of these mitigation measures, the CDRP's impact on construction emissions of diesel $PM_{2.5}$ would be below the threshold of >0.3 $\mu g/m^3$ and would be reduced to a less than significant level,

Table 4.13.6: Summary of Potential Health Risk from Project Construction with Mitigation, on EIR page 4.13-40 is revised. The revised table is shown below.

(Revised) Table 4.13.6: Summary of Potential Health Risk from Project Construction with Mitigation

Type of Estimated Health Impact	Cancer Risk (per 1,000,000)	Chronic Hazard Quotient[1]	Ambient Diesel $PM_{2.5}$ Concentration Increase ($\mu g/m^3$)
Residents			
Maximum exposed individual resident, adult	5.2	0.06	0.26
Maximum exposed individual resident, child	9.96	0.06	0.26
Workers			
Maximum exposed individual worker, adult	6.4	0.06	NA[2]
Campers			
Maximum exposed individual camper, adult	0.3	--*	NA[2]
Maximum exposed individual camper, child	0.6	--*	NA[2]
Hikers			
Maximum exposed individual hiker, adult	2.0	--*	NA[2]
Maximum exposed individual hiker, child	4.9	--*	NA[2]

Type of Estimated Health Impact	Cancer Risk (per 1,000,000)	Chronic Hazard Quotient[1]	Ambient Diesel $PM_{2.5}$ Concentration Increase (µg/m^3)
BAAQMD Threshold of Significance	≥10.0	1.0	≥0.3

Notes:

* A chronic Hazard Quotient is not estimated for campers and hikers/day visitors because exposures are expected to be discontinuous over short durations and do not allow for estimation of chronic non-cancer endpoints.

[1] The Hazard Quotient is equivalent to the Hazard Index because only a single chemical was evaluated in this HRSA.

[2] In accordance with the 2010 BAAQMD CEQA Guidelines, the ambient diesel $PM_{2.5}$ criterion is applied to receptors within a 1,000-foot zone of influence from the edge of construction activities. Receptors outside this zone of influence are shown as "NA" to indicate the threshold of significance is "Not Applicable"

Source: ENVIRON 2009

The second sentence in the first full paragraph on EIR page 4.13-40 is revised as follows:

> Construction-related activities (e.g., ground disturbance) at these locations could result in the airborne entrainment of NOA, which is an identified TAC.

The second sentence in the fifth full paragraph on EIR page 4.13-41 is revised as follows:

> Although construction-related emissions were determined to be significant when compared to the 2010 BAAQMD thresholds, criteria air pollutant and precursor emissions associated with operation of the proposed project were determined to be less than significant.

The fourth sentence in the sixth paragraph starting on EIR page 4.13-41 and continuing on EIR page 4.13-42 is revised as follows:

> Thus, project-generated emissions would also not conflict with ~~any~~ applicable air quality planning efforts regarding criteria air pollutant or precursor emissions.

The second sentence in the first full paragraph on EIR page 4.13-42 is revised as follows:

> Thus, project-generated emissions would also not conflict with ~~any~~ applicable air quality planning efforts.

The fifth sentence in the second full paragraph on EIR page 4.13-42 is revised as follows:

> It also considers steps that California intends to take to reduce GHG emissions ~~and~~ as well as actions the City and County of San Francisco and SFPUC are taking to reduce GHG emissions, including the City's *Climate Action Plan*, ~~and~~ 2008 Greenhouse Gas Reduction Ordinance, and Draft Greenhouse Gas Reduction Strategy (BAAQMD 2010b).

The third full paragraph on EIR page 4.13-42 is revised as follows:

> Use of barges for hauling (Option 2) would result in ~~fewer~~ lower worst-case CO_2 emissions.

The last sentence in the fourth full paragraph on EIR page 4.13-42 is revised as follows:

> Use of barges for hauling (Option 2) would result in ~~fewer~~ lower worst-case CO_2 emissions.

The following changes are made to the third sentence in the first full paragraph on EIR page 4.13-43:

> The CARB was ~~is~~ expected to review and begin adopting the EAMs by January 1, 2010 and has begun doing so. ~~, so~~ Therefore, equipment used for construction of the proposed project after 2010 ~~c~~would be subject to currently adopted ~~these~~ requirements as well as any future requirements that might be adopted prior to project construction.

The third paragraph starting on EIR page 4.13-43 and continuing on EIR page 4.13-44 is revised as follows:

> Given the small amount of GHGs that would be emitted from the proposed project during construction, continuing implementation of GHG reduction actions by the City and County of San Francisco (CCSF) and SFPUC, including the Greenhouse Gas Reduction Strategy, additional GHG reduction actions that the SFPUC would implement as part of the WSIP (see Subsection 4.13.1.2, Regulatory Framework, above), and ~~the lack of~~ no discernible change between existing and future GHG emissions from operation-related activities, the proposed project would not conflict with the state's goals of reducing GHG emissions to 1990 levels by 2020, or the City's GHG reduction goals established in the Greenhouse Gas Reduction Ordinance.

The following reference is added to EIR page 4.13-45 after the seventh listed reference:

> Bay Area Air Quality Management District (BAAQMD). 2010b. Letter from Jean Roggenkamp, Deputy Air Pollution Control Officer, BAAQMD, to Bill Wycko, San Francisco Planning Department, regarding Draft GHG Reduction Strategy. October 28, 2010.

Chapter 5, Mitigation Measures

Section 5.4, Vegetation and Wildlife

The fifth bullet under Mitigation Measure 5.4.1a on EIR page 5-3 is revised as follows:

- **California Tiger Salamander Pre-construction Survey.** A preconstruction survey will be conducted at each work site where there would be ground-disturbing activities to identify suitable California tiger salamander burrow aestivation areas. Aestivation habitat will be defined as the presence of two or more small mammal burrows greater than 1 inch in diameter within a 10-foot-diameter area and within 10 feet of proposed construction sites (i.e., the presence of a single isolated gopher hole would not be considered habitat). As feasible within the context of the work area, aestivation areas will be temporarily fenced and avoided.

  A California tiger salamander salvage and relocation plan will be prepared in coordination with USFWS and CDFG. A qualified biologist will carry out the salvage and relocation operations at construction sites where upland habitat has been identified. Surveys and trapping of California tiger salamanders will occur in the rainy season prior to construction or as directed by resource agency permits. The effort shall be appropriately timed with respect to salamander activity for the year and proposed construction activities. Drift fences and pitfall traps within or on the perimeter of construction sites will be used to capture and relocate animals to suitable areas nearby that will not be affected by construction. USFWS trapping protocols will be followed. Exclusion fencing (described in Mitigation Measure 5.4.2, Construction Measures) will be regularly maintained and monitored until the start of and throughout construction.

The following changes are made to Mitigation Measure 5.4.3, starting on EIR page 5-10:

5.4.3 Compensation Measures

The SFPUC shall compensate for unavoidable impacts on special-status species and sensitive habitats in accordance with a detailed compensation plan or plans. The compensation plan(s) shall be prepared by a qualified restoration ecologist and shall be consistent with all required permits. The final compensation plan(s) shall fully compensate for direct and indirect impacts on special-status species and for the temporal, long-term, and permanent losses of habitat areas, functions, and services and shall include: a description of the resource types and amounts that will be provided; the methods of compensation (i.e., restoration, rehabilitation, re-establishment, establishment, enhancement, and/or preservation); and the manner in which the resource functions and services of the compensation project will address the related project impacts. The final compensation acreages will be determined in consultation with the permitting agencies, with further details specified in the compensation plan(s). The final compensation plan(s) shall ~~provide, at minimum~~ include the following sections:

5.4.3a Compensation Goals and Objectives

Timeframes provided for the following goals and objectives are the goals for meeting success criteria, not for initiating compensation actions. Replanting and grading would begin as soon as practicable, but no later than one year following completion of construction.

- **Wetlands and Other Waters.** Fully compensate for impacts on approximately 4.61 acres of wetlands and open water, and 4,682 linear feet of stream habitat by ~~restoring~~ establishing and enhancing wetlands, and enhancing streams and open water ~~establishing wetland~~ habitat~~s~~ at the proposed mitigation areas ~~South Calaveras and San Antonio Mitigation Areas~~ within 5 to 10 years of completion of construction.
- **Riparian Habitat.** Fully compensate for impacts on approximately 7.9-acres of riparian habitat by enhancing, ~~restoring and~~ establishing, and rehabilitating riparian habitat at the proposed mitigation areas ~~South Calaveras and San Antonio Mitigation Areas~~ within 10 years of completion of construction.
- **Oak Woodlands and Savannah.** Fully compensate for impacts on approximately 24.0 acres of oak woodland and savannah habitat by ~~restoring~~ enhancing and establishing oak woodland and savannah habitat at the proposed mitigation areas ~~San Antonio Mitigation Area~~ within 10 years of completion of construction. Impacts on oak woodlands and savannah may also be compensated for in whole or in part through a contribution to the Oak Woodlands

Conservation Fund as established under subdivision (a) of Section 1363 of the Fish and Game Code.

- **California Red-legged Frog Habitat.** Fully compensate for impacts on approximately 0.11 acre and 10,366 linear feet of California red-legged frog aquatic breeding habitat, and fully compensate for any loss of California red-legged frog at the Alameda Creek Diversion Dam (ACDD) and breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek that may result from a potentially increased bullfrog population by ~~improving~~ enhancing, establishing, and/or preserving aquatic breeding habitat through predator control and vegetation management, and preserving aquatic breeding habitat in impaired water bodies in the proposed mitigation areas ~~South Calaveras Mitigation Area (SCMA)~~ within 5 years of completion of construction, and by improving breeding habitat conditions in Alameda Creek from the ~~Alameda Creek Diversion Dam (~~ACDD~~)~~ to the Calaveras Creek confluence beginning with the advent of bypass flows; fully compensate for permanent impacts on approximately 2.33 acres and 4,387 linear feet of California red-legged frog aquatic non-breeding and 656 acres of upland habitat within 5 years of completion of construction by ~~restoring,~~ enhancing and/or establishing~~,~~ and protecting aquatic non-breeding ~~intermittent stream~~ habitat and enhancing and/or establishing and preserving upland/dispersal habitat at the proposed mitigation areas~~South Calaveras and San Antonio Mitigation Areas~~ within 10 years of completion of construction.
- **California Tiger Salamander Habitat.** Fully compensate for impacts on approximately 0.11 acres of California tiger salamander aquatic habitat by ~~improving~~ enhancing, establishing, and preserving aquatic habitat through predator control and vegetation management in impaired water bodies in the ~~SCMA~~ proposed mitigation areas within 5 years of completion of construction; fully compensate for permanent impacts to 971.6 acres of upland habitat ~~within 5 years of completion of construction~~ by enhancing, establishing and/or preserving ~~protecting~~ upland habitat within 5~~10~~ years of completion of construction.
- **Alameda Whipsnake Habitat.** Fully compensate for impacts on approximately 33 acres of scrub/shrub habitat and 13.7 acres of rock outcrop habitat for the Alameda whipsnake by enhancing and/or establishing scrub habitat and protecting rock outcrops at the Sage Canyon Mitigation Area within 5 years of completion of construction; fully compensate for permanent impacts on approximately 606.9 acres of woodland and grassland habitat by ~~protecting~~ enhancing and/or establishing grasslands and woodlands adjacent to scrub at the proposed ~~all four~~ mitigation areas within 10 years of completion of construction.
- **Callippe Silverspot Butterfly Habitat.** Fully compensate for impacts on approximately 0.57 acres of callippe silverspot butterfly larval habitat by enhancing, establishing and/or protecting grasslands containing the larval host plant (*Viola pedunculata*) at the proposed mitigation areas ~~SCMA and Sage Canyon Mitigation Area~~ within ~~5~~10 years of completion of construction.
- **Foothill Yellow-legged Frog Habitat.** Document that project benefits to foothill yellow-legged frog habitat in Alameda Creek from the ACDD to the Calaveras Creek confluence fully compensate for ~~the~~any loss of foothill yellow-legged frog at the ACDD and for the loss of approximately 9,421 linear feet (approximately 1.8 miles) of habitat in Arroyo Hondo, ~~and~~ fully compensate for

~~any~~0.03 acre ~~loss~~ of aquatic habitat at the ACDD, and for any loss of breeding habitat in Alameda Creek downstream of the confluence with Calaveras Creek that may result from a potentially increased bullfrog population through monitoring and adaptive management within 5 years of the start of bypass flows at the ACDD.

- **Annual Grasslands.** Fully compensate for impacts on approximately 418 acres of annual grassland habitat by ~~establishing~~ enhancing native perennial grasslands and enhancing and protecting non-native annual grasslands at ~~all four~~ the proposed mitigation areas within 5 years of completion of construction.
- **Serpentine Grasslands.** Fully compensate for impacts on approximately 13.6 acres of serpentine grassland habitat by enhancing and protecting serpentine grasslands at the Goat Rock Mitigation Area within 5 years of completion of construction.

5.4.3b Site Selection

The final compensation plan(s) shall include a description of the factors considered during the final mitigation site selection process, including consideration of watershed needs~~, on-site alternatives,~~ and the practicability of accomplishing ecologically self-sustaining habitats at the mitigation sites. All sites selected must be known to support, or be able to support, the required habitat functions and services, or as otherwise determined in consultation with permitting agencies.

Table 5.1: Sensitive Biological Resources That Could Be Affected by Mitigation Activities, is revised to include mitigation activities at the Koopmann Road Mitigation Area. The revised table is shown on the following page.

The first paragraph under the "Cultural Resources Study Area" discussion on EIR page 5-16 is revised to include new text and new paragraph breaks, as shown below:

Cultural Resources Study Area. The ASR Addendum conducted a literature review, a geoarchaeological sensitivity assessment, and an archaeological and built environment pedestrian survey. The ASR Addendum identified, recorded, and evaluated seven isolated historic-era features and three isolated prehistoric features. Habitat restoration activities have been redesigned so that ground-disturbing activities would avoid potentially significant features identified within Sage Canyon. The ASR Addendum concludes that "the remaining isolated artifacts do not appear to retain the values that would make them eligible for inclusion in the CRHR [California Register of Historical Resources] or NRHP [National Register of Historic Places]." Additionally, "the types of project activities proposed within these [Biological Mitigation] areas would be unlikely to affect these resources."

Similarly, for the Koopmann Road Mitigation Area, a literature review and a pedestrian survey was completed by Pacific Legacy, Inc. and Carey & Co., Inc. (2009a, 2009b). The resulting report, *Historic Context and Archaeological and Architectural Survey Report for the Habitat Reserve Program, Alameda, San Mateo, Santa Clara, and*

(Revised) Table 5.1: Sensitive Biological Resources That Could Be Affected by Mitigation Activities

Resource	Koopmann Road Mitigation Area	South Calaveras Mitigation Area	Sage Canyon Mitigation Area	San Antonio Mitigation Area	Goat Rock Mitigation Area	Mitigation
Wetlands and Waters of the state and U.S.	X	X	X	X	X	5.4.1 – Avoidance or minimization of impacts through permit conditions; prevention of pollutant discharge 5.4.2 – Restoration of temporary impacts
California red-legged frog	X	X		X		5.4.1 – Pre-construction avoidance and minimization 5.4.2 – Restoration of temporary impacts to habitat
California tiger salamander	X	X		X	X	5.4.1 – Pre-construction avoidance and minimization 5.4.2 – Restoration of temporary impacts to habitat
Alameda whipsnake		X	X	X		5.4.1 – Avoidance and minimization of effects and monitoring of construction 5.4.2 – Restoration of temporary impacts to habitat
Foothill yellow-legged frog		X		X		5.4.1 – Avoidance of direct effects
Western pond turtle	X	X		X		5.4.1 – Avoidance of direct effects; worker education 5.4.2 – Restoration of temporary impacts to habitat
Nesting raptors	X	X	X	X	X	5.4.1 – Pre-construction surveys; nest avoidance
Upland Species of Special Concern and Migratory Birds	X	X	X	X	X	5.4.1 – Minimization of effects on habitat; minimization of impact 5.4.2 – Restoration of temporary impacts to habitat

Tuolumne Counties (Pacific Legacy, Inc. and Carey & Co., Inc. 2009c) identified one isolated historic-era feature at the Koopmann Road Mitigation Area. Habitat restoration activities have been designed so that ground-disturbing activities would fully avoid the potentially significant feature at the Koopmann Road Mitigation Area.

The impact of habitat creation, restoration and enhancement activities within the Biological Mitigation Areas on known cultural resources would therefore be less than significant.

Unknown archaeological resources may be accidentally disrupted during habitat restoration, creation and enhancement activities within the Biological Mitigation Areas. See Section 4.10.2.3, Cultural Resources, Impact 4.10.2: Impact of Construction Activities on Unknown Archaeological Resources. Implementation of Mitigation Measure 5.10.2, Accidental Discovery Measures, would identify and preserve the information potential of archaeological resources in the event of accidental discovery, and thereby reduce potential impacts of construction on unknown archaeological resources to a less-than-significant level.

Existing residences are located within 150 and 350 feet respectively of the South Calaveras and Koopmann Road Mitigation Areas. Operation of construction equipment within 500 feet of any residential receptors could generate noise levels that exceed the 70-dBA speech interference threshold, a significant impact. Therefore, habitat compensation activities at the Koopmann Road and South Calaveras Mitigation Areas could result in significant temporary noise impacts. Implementation of Mitigation Measure 5.14.1, which would require the contractor to implement noise controls during construction, would reduce noise impacts to a less-than-significant level.

The use of heavy equipment for excavation and grading and trucks to haul excess spoils offsite from the mitigation areas would generate criteria pollutants and particulate matter from diesel exhaust and fugitive dust. Although these emissions would be substantially lower than the emissions generated by construction of the CDRP, the same mitigation measures required for project construction would be applied to reduce emissions from implementation of the habitat compensation activities. Implementation of Mitigation Measures 5.13.1a, 5.13.1b, 5.13.3a and 5.13.3b would reduce air quality impacts related to the habitat compensation actions to a less-than-significant level.

Overall, implementation of habitat compensation activities would not result in any additional significant impacts beyond those disclosed for the CDRP or an increase in the severity of a significant impact. Implementation of mitigation measures identified in the EIR for the CDRP where applicable would reduce all associated impacts to a less than significant level.

Section 5.9, Hazards and Hazardous Materials

The following revision is made to Mitigation Measure 5.9.2b, last bullet on EIR pages 5-31:

- Signs ~~would~~shall be posted at the entrance to work areas where activities that disturb NOA would occur and along the road to indicate where NOA-containing materials are known to be present or handled.

Section 5.10, Cultural Resources

The following new third paragraph is added to Mitigation Measure 5.10.2, on page 5-34. The rest of the measure is unchanged.

> SFPUC Construction Measure #9 for cultural resources requires that construction activities be suspended immediately if there is any indication of an archaeological resource.
>
> To avoid any potentially significant adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in State CEQA Guidelines Section 15064.5(a)(c), the project sponsor shall distribute the Planning Department's archaeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor firms (including demolition, excavation, grading, foundation, pile driving); and/or to utilities firm involved in soil-disturbing activities within the project site. Prior to any soils-disturbing activities being undertaken, each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel, such as machine operators, field crew, pile drivers, and supervisory personnel. The project sponsor shall provide the ERO with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel have received copies of the "ALERT" sheet.
>
> Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the SFPUC shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

Revisions are made to Mitigation Measure 5.10.5, EIR pages 5-35 – 5-37 to update the measure to be consistent with the current SFPUC approach and to provide additional details on where, when, and under what circumstances mitigation is required. The measure is split into Measures 5.10.5a and 5.10.5b, and the text is revised and expanded, as shown below:

> **5.10.5 Paleontological Resources**
>
> **Paleontological Resources Training**
>
> Prior to the initiation of any site preparation ~~and/~~or start of construction, the SFPUC shall ensure that all construction forepersons and field supervisors receive training overseen by a qualified professional paleontologist or a California Registered Professional Geologist (California RPG) with appropriate paleontological expertise, as defined by the Society of Vertebrate Paleontology's ~~(SVP)~~ Conformable Impact Mitigation Guidelines Committee (SVP 1995 Guidelines), ~~and~~ who is experienced in teaching non-specialists, to ensure that ~~they~~ forepersons and field supervisors can recognize fossil materials in the event that any are discovered during construction. Training on paleontological resources shall also be provided to all other construction workers but may include videotape of the initial training and/or the use of written materials rather than in-person training by a paleontologist. Training shall include an explanation of which portions of the project (i.e., excavation for the Left Abutment Core and Shell Foundation Trench; Right Dam Abutment; Stilling Basin cut slope, above an elevation of approximately 780 feet; Spillway Discharge Channel; the top formation of Borrow Area B, above elevation of approximately 780 feet; Borrow Area E/Disposal Site 5; Staging Areas 5, 7, and 8; and

Electrical Distribution Line Upgrade) that possess a high sensitivity for potential paleontological resources.

~~Conduct~~ Pre-Construction assessment, resource avoidance and/or salvage, and construction monitoring for paleontological resources ~~Surveys for Significant Paleontological Resources in Areas of Undetermined and High Paleontological Sensitivity~~

Pre-construction assessment, resource avoidance and/or salvage, and construction monitoring for paleontological resources within excavation for the Left Abutment Core and Shell Foundation Trench; Right Dam Abutment; Stilling Basin, above an elevation of approximately 780 feet; Spillway Discharge Channel; the top formation of Borrow Area B, above an elevation of approximately 780 feet; Borrow Area E/Disposal Site 5; Staging Areas 5, 7, and 8; and Electrical Distribution Line Upgrade which would be constructed partially or wholly in geologic units with a high potential for paleontological resources.

Prior to construction, the SFPUC ~~will~~ shall implement the following:

- A literature review shall be conducted by a California RPG with appropriate paleontological expertise or a qualified professional paleontologist, as defined by the SVP 1995 Guidelines to ensure the geologist/paleontologist is familiar with previous documentation prepared for the project, and the latest data on fossil localities within the formations in the project region. ~~Contract with a California Registered Geologist (California RG) or a qualified professional paleontologist, as defined by the SVP's Conformable Impact Mitigation Guidelines Committee (1995), to conduct a more detailed evaluation of potential paleontological resources in those areas of the project identified as undetermined or highly sensitive for paleontological resources.~~
- ~~The evaluation will include a thorough literature-based and~~ A ~~field~~ reconnaissance-level field assessment ~~survey~~ of the ~~potential~~highly sensitive areas where ground disturbance (grading or excavation) activities ~~are planned~~shall be conducted. The field ~~survey~~assessment ~~will~~shall be limited to identifying potentially significant features at the surface. In areas of thick ground cover, this assessment may need to be conducted after vegetation clearing.
- The ~~evaluation will~~ results of the field assessment shall be documented in a ~~report~~technical memorandum to be submitted for review and approval by the ERO or designee prior to the start of construction, which shall include recommendations for appropriate and feasible procedures to avoid or minimize damage to any paleontological resources expected to be present. The memorandum shall also make recommendations regarding the need, if any, for paleontological monitoring of ground-disturbing activities. In the event that the memorandum identifies recommendations for monitoring, it shall include information on where, when, and how this monitoring shall be conducted. The ERO or designee shall review and approve the memorandum in consultation with the SFPUC.
- If the evaluation and ~~survey~~ field assessment result in the discovery of a paleontological resource exposed at the surface, or confirm the potential for impacts on significant paleontological resources, ~~Mitigation Measures 5.10.5 and 5.10.6 will also be implemented. Mitigation Measure 5.10.3 will be implemented as a safeguard regardless of the identified likelihood of potential impacts~~ then

avoidance and/or salvage and monitoring shall also be implemented as described below.

~~**Perform Pre-Construction Surface Salvage of Any Significant Paleontological Resources Discovered**~~

If a significant paleontological resource is discovered at the ground~~'s~~ surface as a result of the preconstruction ~~surveys conducted per Mitigation Measure 5.10.4~~ assessment and cannot be avoided through exclusion of the area from project disturbance (e.g., through a project change or the installation of exclusion fencing), the SFPUC ~~will~~ shall retain ~~a California RG or~~ a qualified professional paleontologist ~~(as defined in Mitigation Measure 5.10.4)~~ to salvage and treat the resource prior to construction activity in the immediate vicinity of the find. Salvage of the resource ~~would~~ shall include recovering the item and properly documenting, preparing, and curating the find. Recommendations for any treatment that is required will be consistent with SVP 1995 Guidelines and currently accepted scientific practice. If required, t~~T~~reatment of the resource may include preparation and recovery of fossil materials for housing in an appropriate museum or university collection, and may also include preparation of a report for publication describing the find. If no report is required, the SFPUC will ensure that information on the nature, location, and depth of all finds is available to the scientific community through university curation or other appropriate means. No construction activities at the location of the find ~~will~~ shall be allowed until the salvage operation is completed and authorization is provided by the ~~SFPUC~~ ERO or designee.

~~**Conduct Paleontological Resources Monitoring during Construction in Areas of Undetermined and High Paleontological Sensitivity, as Required**~~

If determined necessary ~~after implementation of Mitigation Measure 5.10.4, SFPUC will retain~~ by the ERO or designee after review of the preconstruction assessment memorandum~~)~~, a qualified professional paleontologist, as defined by the ~~SVP's Conformable Impact Mitigation Guidelines Committee (~~SVP 1995 Guidelines)~~, to~~ shall conduct ~~onsite~~ periodic monitoring ~~for unanticipated discovery of potentially significant paleontological resources~~ during ~~initial~~ ground disturbing activities (e.g., grading and excavation) at sites where ~~in the areas with geological units identified as undetermined or highly sensitive for~~ paleontological resources are confirmed or likely to be present (i.e., within the Briones, Orinda, or Claremont Formations; Temblor Sandstone; Older Alluvium; or colluvium or landslide deposits derived from these units formations).~~, and as field-verified by the qualified paleontologist. After initial ground disturbance activities in the paleontologically sensitive areas, monitoring will cease but a~~ The paleontologist ~~will~~ shall also be retained on-call by the SFPUC and its contractor throughout ~~the project in the event of an unanticipated find during subsequent construction~~ ground-disturbing activities.

Paleontological monitoring, if required, will consist of periodically inspecting disturbed, graded, and excavated areas. The monitor will have authority to divert grading or excavation away from exposed areas temporarily in order to examine disturbed areas more closely, and/or recover fossils. The monitor will coordinate with the construction manager so that monitoring is thorough but does not result in unnecessary delays.

If potential fossils are discovered during construction, all earthwork or other types of ground-disturbance ~~in the vicinity~~ within 50 feet of the find ~~will~~ shall stop immediately

> until a qualified professional paleontologist, as defined by the SVP's ~~Conformable Impact Mitigation Guidelines Committee (SVP~~ 1995~~)~~ Guidelines, can assess the nature and importance of the find and recommend appropriate salvage and treatment (as described ~~in Mitigation Measure 5.10.5~~ above). Once the monitor has assessed the find, the monitor may propose modifications to the stop-work radius based on the nature of the find, site geology, and the activities occurring on the site. The monitor's recommendations shall be subject to review and approval by the ERO or designee. The SFPUC ~~will~~ shall be responsible for ensuring that the recommendations of the paleontological monitor regarding treatment and reporting are implemented and reported to the San Francisco Planning Department.

5.13 Air Quality

The following new paragraph is added under the subheading "Mitigation Measures" on EIR page 5-38:

> The following BAAQMD-recommended mitigation measures may be altered, supplemented, or deleted as determined appropriate by BAAQMD to meet the BAAQMD-enforced performance standard for emissions of air contaminants during BAAQMD's permit review process, since the BAAQMD has final authority over the terms of the Authority to Construct Permit for the proposed project as described in EIR Section 3.7.3, Agency Approvals (EIR page 3-74).

The introductory paragraph under Mitigation Measure 5.13.1a, Fugitive dust mitigation measures recommended by the Bay Area Air Quality Management District, on EIR page 5-38 is revised as follows:

> The SFPUC shall implement the ~~following~~ BAAQMD-recommended mitigation measures, where required, to reduce emissions of fugitive dust (particulate matter, or PM_{10}) from construction activities, including the following:

The bulleted list under Mitigation Measure 5.13.1a on EIR pages 5-38 – 5-39 is revised as follows:

- Water all exposed surfaces (e.g. active construction areas) at least twice daily.
- Cover all haul trucks transporting ~~hauling~~ soil, sand, and other loose materials off-site ~~*or* require all trucks to maintain at least 2 feet of freeboard~~.
- Pave applicable road surfaces as soon as possible and lay any building pads as soon as possible after grading unless seeding or soil binders are used~~, apply water three times daily, *or* apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at the construction site~~.
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.
- Sweep track-out from streets at least daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more).

- Enclose, cover, water twice daily, *or* apply (nontoxic) soil binders to exposed stockpiles (dirt, sand).
- Limit traffic speeds on unpaved roads[4] to 15 miles per hour ~~or as allowed by the BAAQMD based on site conditions~~.
- Post publicly visible signage with the telephone number and person to contact at the SFPUC regarding dust complaints. This person, or project liaison, shall respond and take corrective action within 48 hours. The phone number of the BAAQMD shall also be visible to ensure compliance with applicable regulations.
- Replant vegetation in disturbed areas as quickly as possible.

The new footnote for this text change, added to EIR page 5-39, is shown below:

> [4] The West Haul Road will be developed with clean gravel and watered at least twice daily to avoid generation of fugitive dust; where visible dust is generated, additional water will be applied to the haul road or vehicle speeds will be limited to 15 miles per hour. Additional dust and vehicle speed limits presented in Mitigation Measure 5.9.2a.

The following new paragraph is added at the end of the bulleted list under Mitigation Measure 5.13.1a on EIR page 5-39:

> These fugitive dust mitigation measures work in combination with and will be implemented in addition to dust control measures in Mitigation Measure 5.9.2a – Asbestos Dust Mitigation Plan and Comprehensive Air Monitoring Program.

The introductory paragraph under Mitigation Measure 5.13.1b, BAAQMD-recommended exhaust emissions mitigation measures, on EIR page 5-39 is revised as follows:

> The SFPUC shall implement the following BAAQMD-recommended mitigation measures to reduce exhaust emissions of reactive organic gases, nitrogen oxides, and PM~~$_{10}$~~ from construction activities:

The bulleted list under Mitigation Measure 5.13.1b on EIR page 5-39 is revised as follows:

- Use grid power instead of diesel generators at all construction sites where it is feasible to connect to grid power.
- In contract specifications, include California Code of Regulations, Title 13, Section~~s 2480 and~~ 2485, which limits the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) ~~to 5 minutes at any location~~, with supplemental idling restrictions of two minutes for diesel powered construction equipment per BAAQMD exhaust control measures. Clear signage indicating idling limits shall be provided for construction workers at all access points. This requirement shall also apply to barges in the event that Haul Option 2 is selected. ~~In addition, limit the use of diesel auxiliary power systems and main engines to 5 minutes when within 100 feet of homes while the driver is resting; this would not apply to the SFPUC watershed keeper's residence, which would be vacated.~~
- Minimize idling time to a maximum of 5 minutes for all ~~of all~~ non-construction ~~commuting~~ diesel vehicles and equipment.

- Locate staging areas and equipment maintenance activities as far from sensitive receptors as possible.
- A plan shall be developed and implemented demonstrating that the off-road equipment (more than 50 horsepower) to be used for construction (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
- Develop a schedule of low-emissions tune-ups and perform such tune-ups on all equipment. A log of required tune-ups shall be maintained and a copy of the log submitted to the SFPUC on a monthly basis for review. In addition, all equipment shall be maintained in good working order and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to initial operation at the project site.
- All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.

The first sentence of Mitigation Measure 5.13.3a, Diesel Particulate Matter Reduction - Off-road Equipment, starting on EIR page 5-39, is revised as follows:

> The SFPUC shall ensure that construction-contract specifications include a requirement that all off-road diesel construction equipment is equipped with U.S. Environmental Protection Agency Tier 2 diesel engines as defined in U.S. Code of Federal Regulations, Title 40, Part 89 and are equipped with California Air Resources Board Level 3 Diesel Emission Control Strategies as defined in Title 13, California Code of Regulations, §§2700 through 2710 and meet the California Air Resources Board's most recent certification standards for off-road heavy duty diesel engines. The construction-contract specifications will require the contractor to submit a comprehensive inventory of all off-road construction equipment that will be used during any portion of the construction project. The inventory shall include each piece of equipment's license plate number, horsepower rating, engine production year, confirmation that the equipment contains a Level 3 abatement device verified by the California Air Resources Board, and projected hours of use or fuel throughput for each piece of equipment. The contractor shall update the inventory and submit it monthly to the SFPUC throughout the duration of the project.

The title for Mitigation Measure 5.13.3b, Diesel Particulate Matter Reduction -On-site Haul Trucks and Idling Limits, is revised as follows:

> 5.13.3b Diesel Particulate Matter Reduction – On-site Haul Trucks~~ and Idling Limits~~

The References listing on EIR page 5-44 is revised to include the following references after "Entomological Consulting Services 2004":

> Pacific Legacy, Inc. and Carey & Co., Inc., 2009a. *Habitat Reserve Program Archaeological and Architectural Survey Plan.* Prepared for the San Francisco Planning Department and the San Francisco Public Utilities Commission.

Pacific Legacy, Inc. and Carey & Co., Inc., 2009b. *Addendum Habitat Reserve Program Archaeological and Architectural Survey Plan.* Prepared for the San Francisco Planning Department and the San Francisco Public Utilities Commission.

Pacific Legacy, Inc. and Carey & Co., Inc., 2009c. Historic Context and Archaeological / Architectural Survey Report for the Habitat Reserve Program, Alameda, San Mateo, Santa Clara, and Tuolumne Counties, California. Prepared for the San Francisco Planning Department and the San Francisco Public Utilities Commission.

Chapter 6, Other Topics Required by CEQA

Subsection 6.2.2, List of Relevant Projects

Several changes are made to Table 6.1: Cumulative Projects Related to the CDRP in the Sunol Valley Region, referenced on EIR page 6-9, with the table on EIR pages 6-11-6-17.

On EIR page 6-14, Cumulative Project No. 9 is deleted from the table, as shown below. Note that the subsequent projects listed in the table are not renumbered.

Cumulative Project No.	Project Name/Description	Potential Cumulative Impact Topics	Estimated Construction Schedule
~~9~~	**~~Proposed SFPUC Water System Improvement Program (WSIP) Habitat Reserve Program~~** ~~This project would develop and enhance wetlands and other habitats to be applied toward mitigation of impacts on biological resources resulting from implementation of the WSIP. (Various locations; not shown on Figure 6.1.)~~	~~Terrestrial habitat effects~~ ~~Impacts on fisheries~~ ~~Water quality~~ ~~Agricultural resources~~	~~TBD~~

The following change is made to the description of Cumulative Project No. 18, shown in the table on EIR page 6-17:

SMP-30 Cemex Quarry Expansion

Cemex operates the quarry east of Alameda Creek in Sunol Valley on Calaveras Road. The SFPUC owns the property for this quarry and is currently seeking a new operator.

The quarry operator will install a slurry cutoff wall to reduce the inflow of water from Alameda Creek and San Antonio Creek into the active mining pit on the premises. The cutoff wall along Alameda Creek will be approximately 7,800 feet long at an estimated depth of 35 to 45 feet. The quarry operator will also restore the right bank of Alameda Creek and the left bank of San Antonio Creek with native vegetation.

A new project is added to the end of the table on EIR page 6-17, as shown below:

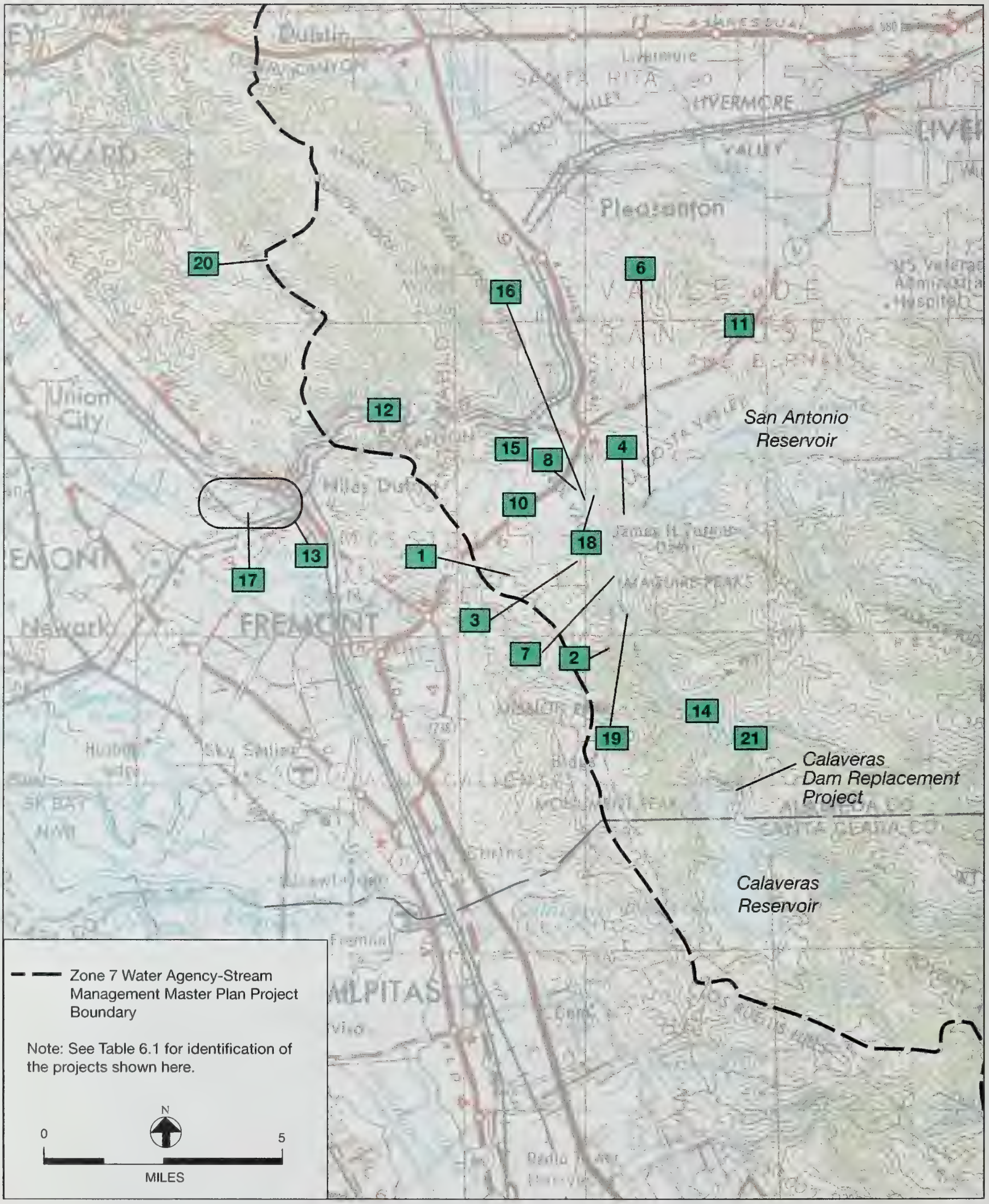
Cumulative Project No.	Project Name/Description	Potential Cumulative Impact Topics	Estimated Construction Schedule
21	**Modification of Natural Barriers in the Alameda Creek Watershed** This action includes the development of additional information necessary to assess the need and required actions for improving adult steelhead passage conditions through the Little Yosemite reach of upper Alameda Creek below the ACDD. The SFPUC would: • Develop adult steelhead performance criteria that can be used to assess current and future passage conditions within Little Yosemite • Prepare conceptual physical modification design plans • Prepare draft design plans to physically modify appropriate features and/or other identified passage impediments • Prepare final design plans incorporating comments from the NMFS and CDFG • Identify the lead agency and funding for implementation and construction of the physical modifications • Monitor all physically modified features within Little Yosemite following completion of the modifications	Aesthetic effects Terrestrial habitat Water quality Geology Hydrology Fisheries and aquatic habitat Air quality Cultural resources Transportation and circulation	2014

Subsection 6.2.3.1, Land Use, Agricultural Resources, and Recreation

The following sentence is added after the fifth sentence of the second paragraph under the heading for Subsection 6.2.3.1, Land Use, Agricultural Resources, and Recreation, on EIR page 6-10:

> In addition, implementation of mitigation measures for SFPUC projects in the Alameda watershed might require habitat creation and restoration actions on CCSF-owned lands that are zoned for agricultural uses and/or leased for grazing lands, although habitat creation and restoration actions would be consistent with allowed uses within their zoning designations.

Figure 6.1: Location of Cumulative Projects in the Sunol Valley Region, on EIR page 6-18, is revised to delete the WSIP Habitat Reserve Program Project Boundary shown in the legend and in the figure itself, and to add Project No. 21, Modification of Natural Barriers in the Alameda Creek Watershed, that is added to Table 6.1. The revised figure is shown on the following page.


20
16
6
11
12
15
8
4
10
18
1
13
17
3
7
2
14
19
21
San Antonio Reservoir
Calaveras Dam Replacement Project
Calaveras Reservoir
Pleasanton
Livermore
Dublin
Fremont
Newark
Union City
Milpitas
Zone 7 Water Agency-Stream Management Master Plan Project Boundary
N
0
5
MILES

Note: See Table 6.1 for identification of the projects shown here.

SOURCE: EDAW&Turnstone JV

FIGURE 6.1: LOCATION OF CUMULATIVE PROJECTS IN THE SUNOL VALLEY REGION (REVISED)

Subsection 6.2.3.2, Vegetation and Wildlife

The following sentence is added at the end of the third paragraph under the heading for Subsection 6.2.3.2, Vegetation and Wildlife, on EIR page 6-20:

> Habitat compensation actions, including habitat creation and restoration, on CCSF-owned lands in the Alameda Creek watershed associated with implementation of mitigation measures for SFPUC projects listed on Table 6.1 would include temporary disruption of extant habitats that may support the same special-status species and sensitive natural vegetation communities that would be affected by the CDRP.

The following sentence is added after the first sentence of the first paragraph on EIR page 6-21:

> Construction of modification of natural stream barriers in the Little Yosemite reach of Alameda Creek would result in temporary construction disturbance of stream and riparian habitat in the area downstream of the Alameda Creek Diversion Dam (ACDD).

The fourth sentence of the third paragraph is revised on EIR page 6-21 as follows:

> Mitigation Measure 5.4.3 would require compensation for unavoidable impacts on wetlands and streams, riparian habitat, aquatic and upland habitat for the California tiger salamander and California red-legged frog, Alameda whipsnake, callippe silverspot butterfly, annual grasslands, serpentine grasslands, and oak woodlands through habitat creation or enhancement; and implementation of compensation measures under Mitigation Measure 5.4.3 at mitigation sites identified in Table 5.1 would also require implementation of avoidance, impact minimization, and restoration measures described in Mitigation Measures 5.4.1 and 5.4.2 to reduce secondary impacts of mitigation measures to less than significant.

The third bullet under the second paragraph on EIR page 6-22 is revised as follows:

> - Implementation of habitat compensation mitigation for individual WSIP facility projects will be combined and implemented through a coordinated program with other mitigation efforts~~, such as through the Habitat Reserve Program (HRP),~~ and shall meet these standards:

The fifth sentence of the first paragraph on EIR page 6-23 is revised as follows:

> The habitat compensation mitigation plans for the CDRP have been closely coordinated with compensation mitigation plans for other WSIP facilities projects in conjunction with the SFPUC's development of ~~its proposed HRP~~ mitigation sites for other WSIP projects and provide for monitoring, long-term management, controls for invasive species, and adaptive management.

Subsection 6.2.3.3, Fisheries and Aquatic Habitat

The second sentence of the fourth paragraph on EIR page 6-23 is revised as follows:

> In addition to the CDRP, other SFPUC projects that could affect habitats and species found within the Alameda Creek watershed include the SVWTP, Various Pipeline Inspection, Upper Alameda Creek Filter Gallery, ~~and~~ SMP-30 Cemex Quarry Expansion

> projects, and Modification of Natural Barriers in the Alameda Creek Watershed (Little Yosemite reach).

The following sentence is added after the third sentence of the last paragraph on EIR page 6-25:

> In addition, Modification of Natural Barriers in the Alameda Creek Watershed (Little Yosemite reach) would further improve opportunities for upstream fish passage.

The fourth sentence of the second full paragraph on EIR page 6-29 is revised as follows:

> The slurry cutoff wall, which is anticipated to be constructed as part of the Sunol Valley Aggregate Quarry project would improve streamflow and fish passage conditions in this reach of the creek, and Modification of Natural Barriers in the Alameda Creek Watershed (Little Yosemite reach) would improve opportunities for upstream fish passage.

The first full sentence on the top of EIR page 6-30 is revised as follows:

> However, as a result of the uncertainties regarding the future conditions that would result from implementation of the future cumulative projects in the Sunol Valley, specific flow release criteria necessary to support in-migration of adult steelhead and out-migration of steelhead smolts (and any adults that may return to the ocean after spawning) through the quarry reach in Alameda Creek and downstream to the confluence with Arroyo de la Laguna were not available at the time of publication of this ~~Draft~~ EIR. Specifically, there is uncertainty regarding:

The following text is added as the first bullet point on EIR page 6-30:

- The effectiveness of modifications of natural barriers in the Little Yosemite reach of Alameda Creek to provide future passage conditions;

Subsection 6.2.3.4, Hydrology

The following new sentence is added at the end of the second paragraph on EIR page 6-33 as follows:

> Implementation of habitat creation and restoration activities associated with mitigation measures for SFPUC projects listed in Table 6.1 could involve creation of impoundments or ponds, but overall drainage patterns with the Alameda Creek watershed would remain substantially unchanged from existing conditions.

The third sentence of the paragraph at the top of EIR page 6-35 is revised as follows:

> The cumulative projects in the watershed potentially would result in temporary perturbations in sediment transport, such as the localized changes associated with the Modification of Natural Barriers in the Alameda Creek Watershed (Little Yosemite reach), but none would likely substantially affect the morphologically significant flows and channel-forming processes in the creek.

Subsection 6.2.3.6, Geology, Soils, and Seismicity

The third paragraph under Section 6.2.3.6, Geology, Soils, and Seismicity, on EIR page 6-36 is revised as follows:

None of the projects listed in Table 6.1 would contribute to any potential geohazards at the project site, including landslides, squeezing ground within the tunnel, fault rupture, ground shaking, liquefaction, and adverse soil conditions. These projects and the associated impacts would occur at some other location. For example, the Little Yosemite project would involve modifications of geologic features to create rock weirs in Alameda Creek downstream of the CDRP facilities at the ACDD, and it is assumed that this project would be designed to avoid or minimize geohazards to the extent feasible. Depending on the final design, the Little Yosemite project could result in a substantial change in the topography of unique geologic or physical features at its individual project site; however, neither the CDRP Variant nor any of the other projects listed on Table 6.1 would contribute to this site-specific impact; thus, there would be no cumulative impact. Similarly, the proposed project would not contribute to impacts associated with these other projects such that a significant cumulative impact would result outside of the CDRP area. Thus, the CDRP would neither contribute to regional geologic or seismic safety impacts nor combine with other local projects to contribute considerably to localized cumulative impacts, and cumulative impacts related to geology, soils, and seismicity would be less than significant.

Subsection 6.2.3.7, Hazards and Hazardous Materials

The discussion in Subsection 6.2.3.7, Hazards and Hazardous Materials, on EIR pages 6-37 – 6.38, is revised and expanded as follows:

The geographic scope for these impacts includes the lands surrounding the reservoir, the Calaveras Road corridor, and the Sunol Valley region.

Past projects and local activities (including SFPUC water conveyance facilities and agricultural operations) may have resulted in the release of contaminants such as petroleum hydrocarbons and pesticides to the subsurface. However, as discussed in Impact 4.9.1, the areas proposed for excavation in the CDRP have not been identified as sites ~~containing previously discharged~~ where contamination has occurred~~nts~~. Therefore, the CDRP would not contribute to cumulative impacts related to the release of contaminants. In addition, due to the site-specific nature of this type of hazardous materials impact, only projects that would occur at or adjacent to the project site could cause releases of contaminants to the surface and subsurface that would potentially result in a cumulative impact related to hazardous materials. None of the projects listed in Table 6.1 would be constructed at or adjacent to the CDRP site, so no cumulative impact associated with the release of contaminants would occur. Cumulative impacts resulting from contaminant releases into waterways (Impact 4.9.6), are discussed above in Section 6.2.3.5, Water Quality.

~~The CDRP could result in the release of hazardous materials during construction, exposing workers and others in the vicinity of the project to elevated contaminant levels. Most, if not all, of the projects described in Table 6.1 would involve the use of hazardous materials. Some of the same workers may be involved with the CDRP and other projects described in Table 6.1. Construction contractors would be required to meet federal and state regulations for worker handling of and exposure to hazardous materials. Section 4.9, Hazards and Hazardous Materials, provides additional information regarding worker safety regulations. Given the extensive amount of federal and state regulations, worker exposure at the other project sites would be expected to be less than significant. The potential impacts associated with exposure of workers to hazardous materials with the~~

~~CDRP in combination with the cumulative projects could be cumulatively significant. The CDRP would be controlled through the implementation of Mitigation Measures 5.9.2a, 5.9.2b, and 5.9.2c in Chapter 5, Mitigation Measures Proposed to Minimize Potentially Significant Adverse Impacts of the Project, which would ensure that exposure to hazardous materials at the CDRP site would be reduced to a less-than-significant level. With implementation of these mitigation measures, residual contributions of the CDRP to potential cumulative impacts from exposure to hazardous materials would not be cumulatively considerable.~~

As discussed in Impact 4.9.2, the CDRP would involve construction activities that would generate dust containing naturally occurring asbestos and metals. Therefore, ~~T~~the CDRP could contribute to cumulative impacts associated with the release of naturally occurring asbestos ~~NOA~~ and metals during construction ~~and the release of hazardous building materials from the demolition of existing structures~~. Of the projects listed in Table 6.1, one project that is in the immediate vicinity of the CDRP would also be constructed in an area with ultramafic rock bedrock that could contain naturally occurring asbestos and metals; the Modifications of Natural Barriers in the Alameda Creek Watershed (Little Yosemite) project would be located on Franciscan mélange bedrock, but would likely require only limited excavation, if any. In addition, background (ambient) levels of airborne asbestos in the vicinity of the proposed project may contribute to health risks. In accordance with the 2010 BAAQMD CEQA Guidelines, a significant cumulative impact would occur if the project construction-related dust emissions, in combination with dust emissions from the Little Yosemite project and ambient concentrations of asbestos resulted in an excess cancer risk level of greater than 100 in a million for off-site receptors.

However, in accordance with Mitigation Measure 5.9-2a, the SFPUC would comply with the Asbestos Airborne Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, and would implement dust control and corrective actions (as needed) to ensure that visible dust emissions would not cross the work area boundaries and that project-related emissions of asbestos and naturally occurring metals would not result an excess cancer risk of greater than 10 in a million to off-site receptors, as discussed in Impact 4.9.2. Because the Little Yosemite project would also be required to comply with these requirements, and health risks from ambient levels of asbestos are of a similar or lower magnitude (Berman, 2010), the project dust emissions in combination with the emissions from the Little Yosemite project and ambient asbestos concentrations would result in less than an excess cancer risk of 100 in a million, and this cumulative impact would be less than significant.

As discussed in Impact 4.2.5, ~~T~~the CDRP would involve the demolition of structures that could contain hazardous building materials. Therefore, the CDRP could contribute to cumulative impacts associated with the release of hazardous building materials from the demolition of existing structures. Although many of the projects listed in Table 6.1 could also involve the demolition of structures that contain hazardous building materials, the regulatory requirements for the abatement of asbestos and lead-based paint would ensure that impacts related to the abatement of these materials are less than significant for all projects. Further, the CDRP would implement Mitigation Measure 5.9.5 which would ensure the proper disposition of electrical equipment containing PCBs, fluorescent light ballasts containing DEHP or PCBs, and fluorescent lights containing mercury vapors which would be considered hazardous wastes. Because impacts related to the exposure to hazardous building materials are limited to the immediate site, and none of the potentially cumulative projects listed in Table 6.1 are located within or adjacent to the CDRP project

> area, cumulative impacts related to the exposure to hazardous materials would be less than significant.
>
> ~~Potential impacts related to accidental releases of hazardous materials would be site-specific and not additive. If releases were to occur at other project locations, they would be expected to affect only nearby soils. Compliance with hazardous materials regulations, including preparation or updating of hazardous materials business plans, would ensure that site-specific impacts are less than significant. Since these impacts are site-specific and there are no other projects in the vicinity of the CDRP site, there would be no cumulative impacts related to the accidental release or exposure to hazardous materials during construction or operation of the cumulative projects.~~
>
> As discussed in ~~Section 4.9, Hazards and Hazardous Materials~~ Impact 4.9.7, construction activities associated with the CDRP could increase the risk of wildfires during project construction. Overlap of cumulative project construction activity in high fire hazard areas could have the potential to result in a significant cumulative impact related to an increase in wildfire risk. However, the CDRP and other SFPUC projects within the SFPUC's watershed are subject to requirements of the SFPUC's Alameda Watershed Management Plan that are designed to control activities that could increase fire risks, and SFPUC projects and all ~~other~~ area projects are required under California Public Resources Code provisions to control activities during construction that could ignite wildfires. Consequently, each project is expected to have a less-than-significant impact and the collective residual effects on wildfire risk from construction activities in the area of the CDRP would not result in a significant cumulative impact. Therefore the CDRP's contribution to increased wildfire hazard would be less than significant.

Subsection 6.2.3.8, Cultural Resources

The following new text is added after the second paragraph at the top of EIR page 6-39:

> In addition, implementation of habitat creation and restoration activities associated with mitigation measures for SFPUC projects listed in Table 6.1 could also encounter previously undiscovered archaeological and paleontological resources and human remains during construction.

The fourth paragraph on EIR page 6-39 is revised as follows to refer to the correct cultural resources mitigation measure:

> There are no known paleontological resources in the construction area, but such resources could be encountered. Mitigation Measures~~ 5.10.3, 5.10.4, and~~ 5.10.5 requires pre-construction training, surveys, and surface salvage if any significant paleontological resources are discovered. In the event of accidental discovery of paleontological resources during construction or operation of the CDRP, Mitigation Measure 5.10.5~~6~~ requires the immediate suspension of work followed by an evaluation of the find by a paleontologist, avoidance (if necessary and feasible), and preparation and implementation of an excavation plan (if avoidance is not feasible). With implementation of Mitigation Measures~~ 5.10.3 through~~ 5.10.5~~6~~, the CDRP's contribution to cumulative impacts on unknown paleontological resources would be less than significant.

Subsection 6.2.3.9, Visual Resources

The second sentence of the second paragraph on EIR page 6-40 is revised as follows:

> Most of the anticipated projects identified in Table 6.1 (such as improvements to Highway 84 and the Little Yosemite project) are outside of the geographic scope of potential visual impacts of the CDRP.

The fourth paragraph on EIR page 6-4- is revised as follows:

> Although the CDRP would have some significant and unavoidable visual impacts, these impacts would not contribute to any cumulative impacts. The CDRP, which is at the south end of the Sunol Valley, is physically separated from the other projects. Views of the other projects from various locations in the Sunol Valley would minimally include the CDRP, if it is visible at all, due to its physical separation from the other projects. Thus, the CDRP is visually isolated and distinct from other anticipated projects such that its effects on scenic views and visual quality could not combine with those of other anticipated projects to cause a cumulatively significant degradation of scenic quality. Consequently, the CDRP would not make a substantial contribution to any cumulative visual impacts.

The first sentence of the third paragraph on EIR page 6-40 is revised as follows:

> A number of SFPUC and other public agency projects (the UACFGP, ~~the WSIP Habitat Reserve Program,~~ the ACWD Alameda Watershed Steelhead Restoration project, ~~and~~ the PG&E Gas Line Crossing project, and the Little Yosemite project) are intended to benefit terrestrial biological resources, water quality, and fisheries of Alameda Creek.

Subsection 6.2.3.11, Air Quality

The second paragraph under Section 6.2.3.11, Air Quality, on EIR page 6-43 is revised as follows:

> The geographic scope of potential impacts related to greenhouse gas (GHG) emissions~~climage change~~, while theoretically ~~is the planet and~~ global in extent, is considered in regional and statewide terms for practical purposes~~greenhouse gas (GHG) emissions past and future are included in the analysis~~. Past emissions continue to affect climate due to long residence times in the atmosphere and due to the accumulation of GHGs over time.

The first sentence of the third paragraph on EIR page 6-44 is revised as follows:

> The 1999 Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines indicate that if all feasible control measures are implemented, the impacts of a project on air quality from construction-related emissions of criteria pollutants, including ozone precursors and particulate matter, would not be significant.

The fourth paragraph on EIR page 6-44 is revised as follows:

> Without mitigation, construction-related emission of PM_{10}, $PM_{2.5}$, and ozone precursors resulting from the CDRP could contribute considerably to potentially significant cumulative impacts in accordance with the 1999 BAAQMD CEQA Guidelines. Based

> on the 1999 Guidelines, ~~A~~application of feasible particulate control measures (Mitigation Measure 5.13.1a, in Chapter 5, Mitigation Measures Proposed to Minimize Potentially Significant Adverse Impacts of the Project) and construction equipment exhaust control measures (Mitigation Measure 5.13.1b) would reduce project emissions such that the CDRP would not have a cumulatively considerable contribution to cumulative air quality impacts related to existing levels of ozone precursors, PM_{10}, and $PM_{2.5}$ (less than significant).

The fifth paragraph starting at the bottom of EIR page 6-44 and continuing to the top of page 6-45 is revised as follows:

> As discussed in Section 4.13, Air Quality, the BAAQMD ~~is currently in the process of developing~~ adopted new quantitative CEQA significance thresholds in June 2010 for construction-related emissions of ozone precursors and particulate matter (BAAQMD 2010~~09~~). ~~The BAAQMD expects to adopt these new thresholds of significance later this year.~~ ~~In anticipation of the future implementation of proposed new BAAQMD CEQA thresholds of significance~~ Accordingly, this ~~Draft~~ EIR provides an analysis of the project's cumulative construction emissions to determine whether they would exceed the ~~proposed~~ thresholds of the 2010 Guidelines.

The first full paragraph on EIR page 6-45 is revised as follows:

> As stated in Section 4.13, Air Quality, construction-related emissions would be below the ~~draft~~ adopted 2010 BAAQMD significance thresholds for PM_{10} exhaust (82 lbs/day) and $PM_{2.5}$ exhaust (54 lbs/day) ~~CO (547 pounds per day [lbs/day]) and SO_2 (219 lbs/day)~~, but could exceed the adopted 2010 thresholds for the ozone precursors ROG (54 lbs/day) and NO_X (54 lbs/day)~~, and for PM_{10} (82 lbs/day), and $PM_{2.5}$ (54 lbs/day)~~. Under the 2010 Guidelines, the PM threshold applies only to exhaust emissions, and fugitive dust emissions are addressed through implementation of dust control best management practices (BMPs), similar to the approach in the 1999 Guidelines. Implementation of the BAAQMD fugitive dust controls identified in Mitigation Measure 5.13.1a, BAAQMD exhaust controls identified in Mitigation Measure 5.13.1b, and the enhanced dust controls for work in areas containing naturally occurring asbestos under Mitigation Measure 5.9.2a would put the project in compliance with the BMP threshold for fugitive dust control, and fugitive dust emissions would be considered less than significant.~~reduce PM_{10} and $PM_{2.5}$ emissions by at least 75 percent. However, even with these reductions, construction-related emissions of PM_{10} and $PM_{2.5}$ would likely exceed the draft threshold of significance of 82 lbs/day and 54 lbs/day, respectively~~.

The second full paragraph on EIR page 6-45 is revised as follows:

> BAAQMD exhaust controls identified in Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b would reduce construction-related emissions of ROG and NO_X by at least 5 percent and 20 percent, respectively. However, even with these reductions, construction-related emissions of ROG and NO_X would likely exceed the ~~drafted~~ adopted 2010 BAAQMD thresholds of significance of 54 lbs/day. Based on existing and feasible mitigation strategies, the project's worst-case construction-related emissions of ROG~~,~~ and NO_X~~, PM_{10} and $PM_{2.5}$~~ cannot be reduced below the ~~proposed~~ BAAQMD thresholds adopted in 2010. In order to be in compliance with ~~proposed~~ adopted 2010 BAAQMD thresholds, ROG would need to be reduced ~~35~~ by 33 percent, and NO_X reduced by 89 percent~~, PM_{10} 98.5 percent, and $PM_{2.5}$ 98.2 percent~~. At this time no feasible mitigation

> exists that would reduce emissions of ROG and NO_X by these percentages and thus, below BAAQMD thresholds adopted in 2010. Therefore, the CDRP's construction-related emissions of ozone precursors~~, PM_{10} and $PM_{2.5}$~~ would have a cumulatively considerable (significant) contribution to a significant cumulative impact from emissions of ozone precursors ~~and particulate matter~~ in accordance with the ~~proposed~~ 2010 adopted BAAQMD thresholds of significance.

The third paragraph starting at the bottom of EIR page 6-45 and continuing to the top of page 6-46 is revised as follows:

> As discussed in Section 4.13, Air Quality, climate change is a global impact caused by emissions of ~~greenhouse gases~~ GHGs. As presented in Section 4.13, no state or regional air quality agency has adopted a methodology or quantitative threshold that can be applied to evaluate the significance of an individual project's contribution to GHG emissions, such as the ones that exist for criteria pollutants. The GHG impacts of other past, present, and reasonably foreseeable future projects, along with implementation of the proposed project could result in potentially significant cumulative impacts. However, ~~with~~ due to continuing implementation of GHG reduction actions by the City and County of San Francisco and SFPUC, ~~and~~ additional proposed SFPUC GHG-reduction actions incorporated into project construction activities, and no discernible changes in GHG emissions from existing and future operational activities, the project's contributions to cumulative GHG emissions would not conflict with the state goals of reducing GHG emissions to 1990 levels by 2020, as set forth in the California Global Warming Solutions Act of 2006 or the City's own climate action goal as set forth in the Greenhouse Gas Reduction Resolution (see "Greenhouse Gases Emissions, Local and Regional Provisions" in Subsection 4.13.1.2, Regulatory Framework, in Section 4.13, Air Quality). Therefore, ~~the~~ neither project construction nor operations would ~~not~~ contribute considerably to cumulative greenhouse gas emissions.

The first and second full paragraphs on EIR page 6-46 are deleted, as shown below:

> ~~In anticipation of the future implementation of proposed new BAAQMD CEQA thresholds of significance for GHG emissions, this Draft EIR provides an analysis of the project's cumulative construction emissions to determine whether they would exceed the proposed thresholds.~~
>
> ~~As stated in Section 4.13, Air Quality, construction-related GHG emissions would not be likely to exceed the total construction GHG emissions threshold (35,250 metric tons [MT] carbon dioxide equivalent [CO_2e]) under proposed GHG Threshold Option 1; however, the project would be likely to exceed the daily threshold (10 MT/day CO_2e) under proposed GHG Threshold Option 2. Implementation of the BAAQMD exhaust controls identified in Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b would reduce project-related GHG emissions. The exact reduction percentage cannot be calculated at this time, and even with these reductions, construction-related emissions of GHG would likely still exceed the draft daily threshold of significance of 10 MT/day CO_2e. No other feasible mitigation exists that would reduce construction-related emissions of GHG to below the BAAQMD draft daily threshold of significance. Therefore, construction-related emissions of GHG would contribute considerably to cumulative greenhouse gas emissions under the proposed BAAQMD GHG thresholds of significance Option 2.~~

The third full paragraph on EIR page 6-47 is revised as follows:

> ~~The BAAQMD is currently working on new guidelines for the analysis of cumulative DPM impacts. At the time of preparation of this Draft EIR the BAAQMD had not issued a recommended methodology or an emissions threshold for evaluation of potential cumulative DPM impacts. However, t~~The BAAQMD 2010 CEQA Thresholds of Significance include cumulative thresholds for risks and hazards associated with new sources and has established a greater than 100 in 1 million excess cancer risk from TACs from all local sources, greater than 10.0 hazards index for non-cancer risk from all local sources, and greater than 0.8 µg/m^3 for ambient PM$_{2.5}$ annual average concentration from all local sources. These cumulative thresholds are about an order of magnitude higher than the thresholds for individual projects. ~~as the threshold for new stationary sources that require a permit to operate, such as power plants, oil refineries, and asphalt plants. Facilities that exceed this threshold are required to implement Best Available Control Technology for Toxics (BACT). Since the BAAQMD does not evaluate cumulative risk for such facilities (i.e., the additive risk of permitting several plants with overlapping air quality impacts), the greater than 10 in a million excess cancer risk is essentially a threshold above which individual stationary source facility's TAC emissions would be considered cumulatively considerable.~~

The fourth full paragraph on EIR page 6-47 is revised as follows:

> ~~For the purposes of this analysis, the project-level DPM threshold of more than 10 excess cancers per 1 million people (based on numerical modeling of emissions sources) was also applied as a cumulative threshold.~~ Based on a preliminary screening analysis, ~~unmitigated~~ construction-related diesel PM emissions from multiple, concurrent construction projects in the Sunol Valley could result in a cumulative diesel PM impact, and as the largest of the construction projects, the CDRP is expected to result in the greatest contribution to this cumulative impact. In addition, Calaveras Road is the only source of diesel PM emissions located within 1,000 feet of any sensitive receptor that could be affected by the CDRP.~~exceed the significance threshold for excess cancer risk for various populations (including residents and offsite workers) in the general vicinity of the project. T~~However, to reduce diesel PM emissions during project construction, Mitigation Measure 5.13.1b requires scheduled tune-ups of construction vehicles and equipment to maintain low emissions and limits idling of all diesel-powered construction equipment to two minutes and for non-~~commuting~~construction diesel vehicles and equipment to a maximum of five minutes.[1] Mitigation Measure 5.13.3a requires all off-road diesel construction equipment to be equipped with USEPA Tier 2 engines and CARB Level 3 (greater than or equal to 85 percent abatement efficiency) Diesel Emission Control Strategies and meet the CARB's most recent certification standards for off-road duty diesel engines. Mitigation Measure 5.13.3b requires use of 2004 model year or newer engines for haul trucks limited to onsite routes. With implementation of these measures, as described in Impact 4.13.3, the CDRP's project-level impact on construction emissions of diesel PM would be reduced to a less than significant level, below the individual project thresholds for diesel PM with respect to cancer risk, non-cancer risk, and ambient PM$_{2.5}$ annual average concentrations. Similarly, other construction projects in the Sunol Valley, all of which combined would be smaller in magnitude than the CDRP, would be subject to the same requirements of the BAAQMD

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[1] It is assumed that worker commuting vehicles (of which less than 1 percent are diesel-fueled) have negligible idling.

> for diesel PM reduction measures, and would be expected to be below the individual project thresholds and have a less than significant impact with implementation of those measures. Therefore, the combined, cumulative impact of the CDRP and other smaller Sunol Valley projects on diesel PM emissions would be expected to be below the cumulative thresholds, and this cumulative impact would be less than significant.

The second full paragraph on EIR page 6-48 is revised as follows:

> ~~To determine whether Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b would be adequate to reduce the cancer and non-cancer risks associated with project-related diesel PM emissions to below the significance thresholds identified above, a Health Risk Screening Analysis (HRSA) was prepared. The HRSA quantifies the human health risk due to exposure to project-generated diesel PM with the mitigation measures in place. The complete results of the analysis are provided in~~ ~~*Data Report for Health Risk Screening Analysis of Diesel Particulate Emissions Associated with Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California*~~ ~~(ENVIRON 2009). As summarized in Table 4.13-6 in Section 4.13 "Air Quality," the results of the HRSA indicate that with the implementation of Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b the potential excess cancer risk from diesel PM emissions at the MEI for the various populations evaluated would be less than the significance threshold of greater than 10 in 1 million for cancer risk and that the non-cancer risk would be less than the threshold of Hazard Index 1 (ENVIRON 2009). Therefore, project-generated construction-related TAC emissions would not contribute considerably to the cumulative condition.~~

The following new reference is added to EIR page 6-56 after the second listed reference to support the revised discussion above:

> Bay Area Air Quality Management District (BAAQMD). 2010. California Environmental Quality Act, Air Quality Guidelines. San Francisco, CA.

Subsection 6.2.3.12, Noise

The fourth sentence of the third paragraph on EIR page 6-49 is revised as follows:

> Based on the noise analysis conducted for this ~~Draft~~ EIR, the noise levels from cumulative traffic on Calaveras Road would be less than 70 A-weighted decibels, steady-state energy level (dBA L_{eq}) during the daytime at both the ranch residence (Receptor D located approximately 2,000 feet west of Calaveras Road) and the watershed keeper's residence (Receptor H located approximately 225 feet east of Calaveras Road).

Section 6.3, Significant Environmental Effects That Cannot Be Avoided if the Proposed Project Is Implemented

The second and third full paragraphs on EIR page 6-54 and the last paragraph on that page, which continues on EIR page 6-55, are revised as follows:

> BAAQMD exhaust controls identified in Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b would reduce the CDRP's construction-related emissions of ozone precursors ~~and particulate matter~~ to less-than-significant levels based on existing BAAQMD thresholds of significance. However, existing and feasible mitigation strategies would not reduce

emissions of ozone precursors ~~and particulate matter~~ below the ~~proposed~~ 2010 adopted BAAQMD thresholds. ~~Similarly, implementing Mitigation Measures 5.13.1b, 5.13.3a, and 5.13.3b would reduce the CDRP's construction-related GHG emissions, but likely not below the proposed BAAQMD GHG threshold of significance Option 2.~~ Therefore, ~~these~~ this project-specific impact~~s~~ would be considered significant and unavoidable.

Based on existing BAAQMD thresholds of significance, the CDRP would not contribute considerably to cumulative air quality impacts related to emissions of ozone precursors and particulate matter. However, using ~~proposed~~ the 2010 adopted BAAQMD thresholds, construction emissions from the CDRP would have a cumulatively considerable contribution to a significant cumulative impact from emissions of ozone precursors ~~and particulate matter~~ that would be significant and unavoidable. ~~Similarly, construction-related emissions of GHG would contribute considerably to cumulative GHG emissions under the proposed BAAQMD GHG threshold of significance Option 2.~~

The proposed project is one of several improvement projects that make up the SFPUC WSIP. Insofar as the proposed project is a component of the WSIP, it would contribute to the WSIP's unavoidable water supply and growth-inducement impact, as follows: indirect growth-inducement impacts in the SFPUC service area.

These impacts were adequately addressed in the PEIR at a sufficient level of detail such that no further analysis is required in this EIR. The analysis contained in the PEIR is incorporated into this ~~Draft~~ EIR by this reference. Since completion of the PEIR, analyses of hydrology in Alameda Creek prepared for the CDRP EIR has shown that streamflow impacts would be less than significant.

References

The following reference is added to EIR page 6-56, to follow the reference for Bay Area Air Quality Management District 2009:

Berman 2010. Technical Memorandum: Development of Risk-Based Air Quality Trigger Levels for the CDRP.

VOLUME 3

Appendix C, Vegetation and Wildlife Survey Reports

Appendix C.2, Evaluation of Proposed Mitigation Areas for the Calaveras Dam Replacement Project, including its figures, is supplemented with an update. The updated appendix will follow the version of Appendix C.2 shown in the EIR. In addition, a new appendix, Appendix C.3, is added to describe the Koopmann Road Mitigation Area. Updated Appendix C.2 and new Appendix C.3 are shown on the following pages. Figures 1 and 2 and the photo appendix associated with Appendix C.2 are presented in Section 12.1 (starting on page 12-53).

Appendix C.2 Update

Update to the June 18, 2009, Evaluation of Areas Proposed as Compensation for Impacts of the Calaveras Dam Replacement Project

EDAW | AECOM

Memorandum

Date: October 11, 2010

To: Chris Kern, San Francisco Planning Department

From: Thomas Leeman, AECOM Wildlife Biologist

Subject: Update to the June 22, 2009 Evaluation of Proposed Mitigation Areas for the Calaveras Dam Replacement Project

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Distribution:

The San Francisco Public Utilities Commission (SFPUC) continues to work closely with the resource agencies through the Interagency Task Force (IATF) to develop the conceptual mitigation for the Calaveras Dam Replacement Project (CDRP). This memo updates the evaluation of proposed mitigation areas for the Calaveras Dam Replacement Project (CDRP) presented in our memo dated June 22, 2009. These updates are based on ongoing refinement to mitigation designs and feedback from the resource agencies on previous drafts of mitigation plans, as reflected in the June 2010 Draft Sunol Region Mitigation and Monitoring Plan (Sunol MMP; URS 2010) and revised compensation tables (Tables 3-1 and 3-2 of the Sunol MMP) dated September 13, 2010.

The mitigation planning has been modified to eliminate several components of the South Calaveras Mitigation Area and to modify boundaries at three of the five mitigation areas to include existing occurrences of listed species (e.g., East Pond at San Antonio Mitigation Area) and exclude areas that require extensive future management and/or provide limited resource benefits (e.g., existing utility easements). These updates are described below. The Goat Rock Mitigation Area has not changed. The addition of the Koopmann Road Mitigation Area is described in a separate memo prepared by URS on May 30, 2010.

Updates

Figures 1 and 2 are updated to show the revised boundaries at the South Calaveras, San Antonio, and Sage Canyon mitigation areas. The boundary of the Goat Rock mitigation area has not changed since the original June 22, 2009 memo was prepared and is not addressed further.

South Calaveras Mitigation Area

Three compensation sites (Stock pond, Ephemeral drainage, and Calaveras Creek) have been removed. These areas are below 890 feet in elevation, and could be partially or completely inundated if there was a future raising of Calaveras Dam (such an activity is not planned). Removal of these areas decreases the overall size of the South Calaveras Mitigation Area. The following paragraph updates the size and amounts of each land cover type present in the mitigation area, and how much compensatory mitigation is planned.

The South Calaveras Mitigation Area is a 323-acre area south of Calaveras Reservoir, located on SFPUC-owned land east of the intersection of Calaveras and Felter Roads and mostly north and east of Marsh Road in Santa Clara County. The area is a mosaic of oak woodlands, grasslands, and riparian habitats that is not accessible to the public. Vegetation is composed of non-native grassland (253 acres)[1], mixed evergreen forest/oak woodland (56 acres), coyote brush scrub (5 acres), Diablan sage scrub (1 acre), and valley oak woodland (4 acres). There are three open water stock ponds totaling roughly 4 acres. Ephemeral drainages and intermittent streams collect and convey water through the area. The mitigation area provides opportunities to enhance or establish approximately 4.14 acres of seasonal wetlands, 0.10 acres (578 linear feet [lf]) of intermittent stream, 0.43 acre (13,726 lf) of ephemeral channel, 3.48 acres of stock ponds, 51.2 acres of oak riparian forest, and 3.94 acres of perennial grasslands, including 3.86 acres with the callippe silverspot butterfly larval host plant johnny jump-up (*Viola pedunculata*). Aquatic habitat for the California red-legged frog and California tiger salamander is impaired by the presence of bullfrogs and predatory fish and could be improved by removing these predators.

The June 22, 2009 memo included a photo appendix (Appendix A). Photos 2 and 3 in Appendix A show views that are no longer included in the South Calaveras Mitigation Area.

San Antonio Mitigation Area

The San Antonio Mitigation Area was modified to include a nearby pond so that aquatic habitat for California tiger salamander would be included. This is to ensure that the mitigation area would function as upland habitat for the California tiger salamander with accessible aquatic breeding habitat. The following paragraph updates the size and amounts of each land cover type present in the mitigation area, and how much compensatory mitigation is planned.

The San Antonio Mitigation Area is a 248-acre area located on SFPUC-owned land on the northeast shore of San Antonio Reservoir at the mouths of San Antonio and Indian Creeks in Alameda County. Vegetation includes non-native grassland (169 acres), mixed evergreen forest/oak woodland (9 acres), valley oak woodland (5 acres), mixed riparian woodland (9 acres), sycamore alluvial woodland (25 acres), willow riparian woodland (15 acres), Diablan sage scrub (9 acres), and one small (0.17 acre) pond. The mitigation area provides opportunities to enhance, establish, or rehabilitate approximately 0.23 acres (2,784 lf) of ephemeral stream, 8.73 acres (19,654 lf) of intermittent stream, 27.5 acres of sycamore alluvial woodland, 0.17 acres of open water, 0.90 acres of seasonal wetland, 1.03 acres of riparian scrub, 4.77 acres of mixed riparian woodland, 1.73 acres of willow riparian, 2.25 acres of oak riparian forest, 57.45 acres of upland oak woodland, 96.27 acres of oak savannah, and 9.58 acres of upland scrub.

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[1] Note that the acres of land cover presented for each mitigation area may not exactly match the size of the mitigation area as a result of rounding.

Sage Canyon Mitigation Area

The Sage Canyon Mitigation Area was modified to expand the boundary westward to include an ephemeral drainage. The following paragraph updates the size and amounts of each land cover type present in the mitigation area, and how much compensatory mitigation is planned.

The Sage Canyon Mitigation Area is a 584-acre area located on SFPUC-owned land north of the Arroyo Hondo arm of Calaveras Reservoir. It straddles the Alameda/Santa Clara County line and extends from the reservoir edge to the ridge top. The drainage where the ACDD tunnel terminates defines the western boundary of the mitigation area. Vegetation includes non-native grassland (304 acres), mixed evergreen forest/oak woodland (110 acres), Diablan sage scrub (95 acres), oak savannah (34 acres), and rock outcrop (4.6 acres). A small (about 0.31-acre) stock pond is located in the northeast portion of the mitigation area. On its northern boundary, the mitigation area is adjacent to federally designated critical habitat for Alameda whipsnake (Unit 5B) (USFWS 2006). Cattle have access to the mitigation area although steep slopes reduce their use of the eastern portion of the area. The mitigation area provides opportunities to enhance 2.84 acres (46, 201 lf) of ephemeral channel, 0.31 acres of open water, 0.18 acres seasonal wetland, 0.20 acres of seep wetland, 3.73 acres of mixed riparian woodland, 108 acres of oak woodland, 34 acres of oak savannah, 299 acres of non-native grassland, 95.4 acres of upland scrub, and to preserve 4.6 acres of rock outcrop. About 38 acres of annual grasslands in the mitigation area contain the callippe silverspot butterfly larval host plant, johnny jump-up.

Sources

URS. 2010. Draft Sunol Region Mitigation and Monitoring Plan. Prepared for the San Francisco Public Utilities Commission. June 2010.

USFWS. 2006 (October 2). Designation of Critical Habitat for the Alameda Whipsnake. Final Rule. Federal Register 71: 58175-58231.

Appendix C.3

Evaluation of the Proposed Koopmann Road Mitigation Area for the Calaveras Dam Replacement Project

URS

Memorandum

Date: May 30, 2010

To: Craig Freeman, SFPUC

From: Steve Leach, URS Corporation

Subject: **Evaluation of Proposed Koopmann Road Mitigation Area**
Calaveras Dam Replacement Project – CUW 37401

This memo is a supplement to the June 22, 2009 memo prepared by EDAW wildlife biologist Thomas Leeman for the Calaveras Dam Replacement Project Draft Environmental Impact Report (DEIR).

Purpose

The San Francisco Public Utilities Commission (SFPUC) proposes to implement compensatory mitigation for impacts to sensitive natural communities and special status species due to construction of the Calaveras Dam Replacement Project (CDRP). Appendix C.2 of the DEIR describes the compensatory mitigation previously proposed to comply with the California Environmental Quality Act (CEQA) and reduce project impacts to sensitive biological resources. The SFPUC recently added Koopmann Road Mitigation Area to the mix of potential sites to be used for habitat compensation as part of CDRP permitting. This addition was based on resource agency preference for this site compared to some components previously included in the draft mitigation proposal.

The Koopmann Road Mitigation Area would occupy approximately 460 acres of SFPUC land east of Interstate 680 and north of State Route 84 in the northwest portion of the Alameda watershed (Figure 1). The SFPUC has determined that the site is not essential for water supply purposes and considers the property to be surplus land, appropriate for sale. Sale of the land would allow other uses, including potential development. The SFPUC has selected this site as a mitigation area to protect and enhance existing biological resources. This memo provides documentation that the proposed Koopman Road Mitigation Area is available and suitable to satisfy the CEQA and resource agency requirements for the CDRP.

Methods

URS and SFPUC biologists assessed the habitat conditions at the Koopmann Road Mitigation Area based on current and historical aerial photography, existing biological data, field investigations, reconnaissance surveys, and discussions with knowledgeable agency staff. This assessment considered the conditions of the following resources:

- Jurisdictional wetlands and other waters,
- Hydrology,
- Soils,
- Vegetation, and
- Habitats potentially utilized by special-status species.

Existing habitats were defined and characterized based on vegetation community mapping completed for the Alameda Watershed Habitat Conservation Plan (AWHCP) with refinements based on field mapping and aerial photographs. A Geographic Information System (GIS) was used to manage data and quantify habitat acreages. Stream lengths were measured using hydrographic data from the California Spatial Information Library (CaSIL).

URS biologists Steve Leach, Francesca Demgen, Dina Robertson, and Jason Pearson in collaboration with SFPUC, CDFG, USFWS, RWQCB, and USACE evaluated habitats within the mitigation area. These evaluations focused on the quality and suitability of the habitat to support special status wildlife species and habitats utilized by those species. Examples of these resources include:

- Wetlands and streams – evaluated for the potential to restore or expand wetland and creek habitat, and qualitatively assessed aquatic habitats for their potential to support the various life history stages of California tiger salamander and California red-legged frog;
- Ponds – evaluated for presence of special status amphibians and non-native predators such as fish or bullfrog species;
- Riparian vegetation – existing and potential riparian vegetation was identified and the effects of grazing were evaluated to determine the potential for rehabilitation and enhancement of this habitat type in the mitigation area.

Vegetation communities identified in the mitigation area were mapped utilizing aerial photos and then characterized for habitat quality based on field observations. Opportunities to rehabilitate or re-establish natural communities were identified in the field and potential restoration and management actions were discussed with CDFG and USFWS biologists during a field visit on March 23, 2010.

Results and Findings

The Koopmann Road Mitigation Area contains five stock ponds. Grasslands dominated by non-native annuals are the most extensive vegetation community in the mitigation area (362 acres). Other vegetation communities in the mitigation area include oak woodland (87 acres); willow riparian (0.6 acres); and sycamore alluvial woodland (7 acres). Sheep Camp Creek bisects the Koopmann Road Mitigation Area. This intermittent stream and another intermittent tributary stream are the primary drainage features within the mitigation area. Evidence of overgrazing within and adjacent to these drainage features include stunted growth and lack of young woody vegetation, low vegetation cover, soil compaction, and erosion features such as head cuts and gullies.

Sheep Camp Creek and the intermittent tributary will be fenced to exclude cattle grazing of the riparian area. The riparian area will be revegetated with native wetland, willow riparian, mixed riparian, sycamore riparian, and oak woodland vegetation. Outside of the exclusion areas, grazing management will be modified to prevent overgrazing of sensitive habitats, reduce weed populations, and maintain and enhance extensive populations of Johnny jump-up (*Viola pedunculata*) the larval host plant for the Callippe silverspot butterfly. Grazing intensity would be managed by altering the timing, duration, frequency, and heard size. Adaptive measures will be implemented to monitor the grazing and alter management if necessary to meet the mitigation area objectives. To facilitate grazing management and redistribute cattle more evenly throughout the grazing units, new water troughs and mineral supplements will be installed on ridgelines. Water will be pumped to troughs from a well and a stock pond.

Eroded banks along the Sheep Camp Creek will be graded to provide a stable slope (where possible) and revegetated with willow riparian vegetation. Several head cuts along the creek channel provide good pool habitat for CTS and CRLF. However, these head cuts lower the ground water table and contribute undesirable quantities of sediment into the downstream reaches of the stream. Further erosion will be halted and pool habitat maintained by installing grade control structures slightly upstream of existing pools. In the event head cutting continues, the grade control structure will limit further erosion while forcing water to plunge over the structure, scouring sediment out of the pool.

Several shallow off channel pools along Sheep Camp Creek were identified as potential breeding or rearing habitat for CRLF. Successful use of the pools is dependent on the duration of ponding in the pools. Enlarging the pools and planting wetland vegetation will enhance the potential breeding habitat potential of theses pools.

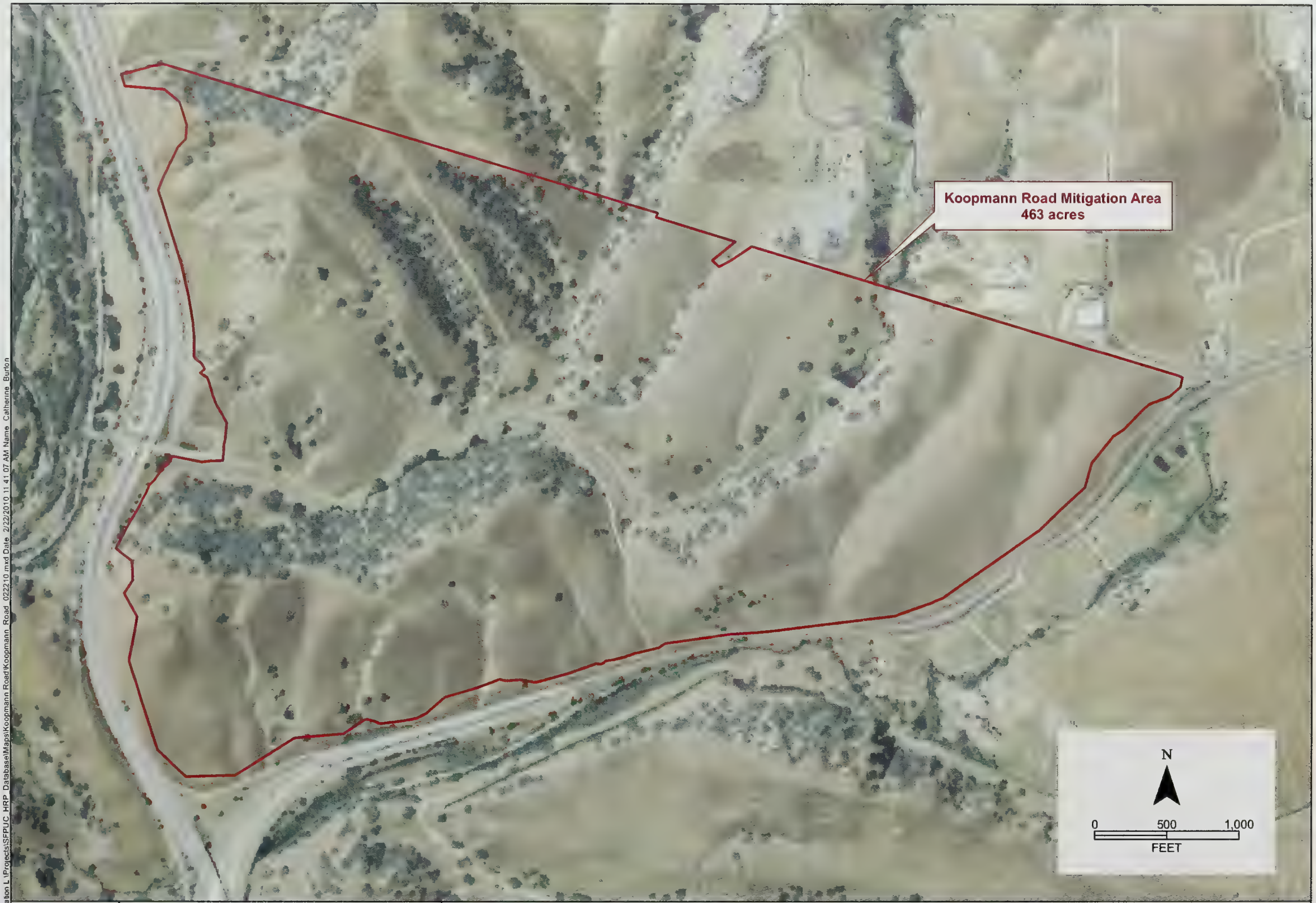
Gully erosion occurs throughout the mitigation area in ephemeral drainages and swales where grazing pressure or fire break grading has stripped vegetation from the channels. Lack of vegetation in combination with a significant change in channel slope has created nick points in the channels that have propagated upstream. Most of the smaller gullies will be revegetated, monitored for regrowth and stability, and managed with a new less intensive and adaptive grazing approach. Two of the larger gullies will be stabilized with grade control structures to control vertical and lateral erosion. These sites would be revegetated with native grasses and/or seasonal wetland vegetation.

Three stock ponds that are potentially utilized by breeding CTS and CLRF are threatened by erosion of unarmored spillways placed through the embankment fill and by the presence of non-native predators. Pond embankment fill will be re-stabilized and appropriate armoring installed in the spillways. Drains will be installed in the three ponds to periodically manage predatory frogs and fish that prey on native species. A low flow bypass structure will be installed upstream of the in-channel pond on Sheep Camp Creek to divert low flows around the pond to maintain or enhance downstream habitats.

Roads within the Koopmann Road Mitigation Area degrade water quality by contributing sediment to the streams. Primary factors that affect this problem are the proximity of the roads to the streams and improper design. Problematic roads will be modified to improve drainage and reduce erosion and sedimentation to the stream. Roads will be out-sloped and rolling dips will be installed at certain distances to reduce erosion. The creek is eroding portions of the road adjacent to Sheep Camp Creek. This segment of road will be abandoned, revegetated, and relocated on the ridgeline. One road culvert crossing will be replaced with a bridge and another equipment ford will be armored to prevent erosion and sedimentation in the channel.

In total, the Koopmann Road Mitigation Area provides opportunities to enhance or establish about 1.7 acres of seasonal wetlands; 0.7 acre (2,300 linear feet [lf]) of ephemeral channel; 1.9 acre (8,500 lf) of intermittent stream; and 1.5 acre of stock ponds. In response to resource agency input on the DEIR, final design of habitat compensation actions at this mitigation area will be conducted in coordination with actions at the South Calaveras, San Antonio, Goat Rock, and Sage Canyon mitigation areas.

cc: Daniel Wade, SFPUC
Greg Lyman, SFPUC
Francesca Demgen, URS Corporation


Koopmann Road Mitigation Area
463 acres
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FEET

San Francisco Public Utilities Commission
Calaveras Dam Replacement Project

Figure 1
Koopmann Road Mitigation Area

URS Corporation L \Projects\SFPUC HRP Database\Maps\Koopmann Road\Koopmann Road 022210 mxd Date 2/22/2010 11 41 07 AM Name Catherine Burton

Appendix I, Mitigation Measure Consistency with WSIP PEIR

On page 2, the following changes are made to the "Notes" column for Measure 4.3-4d, Minimize Tree Removal:

> Not applicable; As stated above, screening devices would be ineffective as mitigation. However, Mitigation Measure 5.4.3 would compensate for habitat losses by establishing, ~~creating, restoring, and~~ enhancing, preserving, and rehabilitating oak woodlands and savannah at the-South Calaveras, ~~and~~ San Antonio, Sage Canyon, and Koopmann Road ~~San Antonio Mitigation Area~~ mitigation areas, and riparian forest at ~~the South Calaveras and San Antonio Mitigation Areas~~ all five mitigation areas.

On page 4, the following changes are made to the "Notes" column for Measure 4.6-2, Habitat Restoration/Tree Replacement:

> Project Measure 5.4.2 revises this measure specific to CDRP impacts. No heritage or other locally designed trees were found. However, Mitigation Measure 5.4.3 would compensate for habitat losses by establishing, ~~creating, restoring, and~~ enhancing, preserving, and rehabilitating oak woodlands and savannah at the-South Calaveras, ~~and~~ San Antonio, Sage Canyon, and Koopmann Road ~~San Antonio Mitigation Area~~ mitigation areas, and riparian forest at ~~the South Calaveras and San Antonio Mitigation Areas~~ all five mitigation areas.

Appendix J, Calaveras Dam Replacement Project: Future Steelhead Cumulative Impacts Analysis – Central California Coast Steelhead

The following revision is made to the last sentence of the third paragraph in the "Existing Condition" discussion under "Reach C-1 (Calaveras Creek – downstream of Calaveras Reservoir)" on page 16:

> Apart from releases and spills based on hydrology, the cone valve below Calaveras Dam is periodically operated for maintenance purposes. This operation usually occurs at least once per year and provides 1 to 2 days of flows of approximately ~~870~~ 1,000 cfs (depending on reservoir water surface elevation).

Appendix K, List of Preparers

The following changes are made to the listing for the San Francisco Planning Department, Major Environmental Analysis, under "Lead Agencies and Project Sponsor" on page 1:

> San Francisco Planning Department, Major Environmental Analysis
> (CEQA Lead Agency)
> ~~1660~~ 1650 Mission Street, Suite ~~500~~ 400
> San Francisco, CA ~~94102~~ 94103
>
> - Bill Wycko, Environmental Review Officer
> - Diana Sokolove, WSIP CEQA Manager
> - Chris Kern, EIR Coordinator
> - Paul Maltzer, Senior Planner

The following changes are made to the listing for EDAW, under "EDAW & Turnstone Joint Venture" in the "Environmental Consultants" list on page 1:

~~EDAW~~ AECOM
150 Chestnut Street
San Francisco, CA 94111

Mark Winsor, Ph.D., Project Manager/Co-Project Director
Sean Bechta, Project Manager
Donna Plunkett, ASLA, Senior Environmental Planner

~~EDAW~~ AECOM Staff
Douglas Bailey, Contract Manager
Charlie Battaglia, Biologist
~~Sean Bechta, Senior CEQA Reviewer~~
Stephanie Coppeto, Wildlife Biologist
Kara Demsey, Water Quality Analyst, Hydrology Task Leader
Leo Edson, Senior Wildlife Biologist
Anne Ferguson, Environmental Planner
Chris Fitzer, Fisheries Biologist
Marie Galvin, Senior Environmental Planner
Vick Germany, Permitting Specialist
Amber Giffin, Senior Word Processor
Sarah Heard, Environmental Planner
Gary Jakobs, Senior CEQA Specialist
Deborah Jew, Word Processor
Peter Jonas, Senior GIS Specialist
Gayiety Lane, Word Processor
Linda Leeman, Senior Wildlife Biologist
Thomas Leeman, ~~PhD~~ Senior Wildlife Biologist
George Lu, Air Quality Specialist
Brian Ludwig, RPA, Archaeologist
Jim Merk, Editor
Gerrit Plattenkamp, Senior Ecologist
Samantha Salvia, Senior Environmental Planner
Christy Seifert, Editor
Nick Tomera, Environmental Regulatory Analyst
Honey Walters, Air Quality Analyst
Jake Weirich, Air Quality Analyst

ESA+Orion Joint Venture
225 Bush Street, Suite 1700
San Francisco, CA 94104

ESA+Orion Staff
Leslie Moulton, Senior CEQA Specialist, Response to Comments Task Director
Joyce Hsiao, Senior CEQA Specialist, Response to Comments Manager
Jill Hamilton, Senior CEQA Specialist, Response to Comments Deputy Manager
Josh Ferris, Senior CEQA Analyst
Chris Mueller, Senior CEQA Analyst

John Davis, Senior Water Resources Analyst
Mary McDonald, Senior Hazardous Materials and Air Quality Analyst
Dylan Duvergé, Paleontology Analyst
Allison Chan, CEQA Analyst and Response to Comments Coordinator

In the listing for URS Corporation under "Persons Consulted" on page 4, an error is corrected and a new name is added, as follows:

URS Corporation (Engineering Design Consultant)
1333 Broadway, Suite 800
Oakland, CA 94612

Mike Forrest, P.E., Senior Engineer
Steve Leach, Senior Environmental Planner
~~Neil~~ Noel Wong, P.E., Project Director
Lois Autié, P.E., Senior Project Manager

ERRATA TO VOLUMES 1 AND 2

VOLUME 1

Chapter 1, Executive Summary

The following references listed on EIR page 1-93 are revised as follows:

California Burrowing Owl Consortium (Burrowing Owl Consortium). 2009. 1993 Survey Protocol and Mitigation Guidelines accessed in 2009, http://222.ucsc.edu/scpbrg/survey.htm. Accessed on June 23, 2009.

EDAW & Turnstone Joint Venture (ETJV). 2006. Final Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission. ~~July~~ August 2006.

Chapter 3, Project Description

In-text citations for the URS 2008c source listed in the references section on EIR page 3-76 are revised as follows (number in parentheses represents number of affected citations on page):

References to URS 2008c on pages 3-26 (4), 3-28 (1), 3-35 (2), 3-37 (2), 3-40 (1), 3-41 (2), 3-43 (2), 3-45 (1), 3-48 (1), and 3-49 (2) are changed to URS 2008a.

The references listed on EIR page 3-76 are revised as follows:

~~URS Corporation (URS). 2008a. Draft Technical Memorandum, *Geotechnical Evaluation, Disposal Sites 3 and 7*, Calaveras Dam Replacement Project, Project NO. CUW 37401, January 7, 2008.~~

URS Corporation (URS). 2008~~c~~a. Final ~~Memorandum from J. Roadifer et al to D. Wade et al re: CUW 37401 – Calaveras Dam Replacement Project, Alternatives Analysis of Disposal Options for Surplus Soil and Rock,~~ CUW 37401 - Calaveras Dam

Replacement Project, *Alternatives Analyses of Disposal Options for Surplus Soil and Rock.* Prepared for the SFPUC. March 5, 2008.

Section 4.4, Vegetation and Wildlife

In-text citations for the following sources listed in the references section on EIR pages 4.4-118, 4.4-119, and 4.4-121 are revised as follows (number in parentheses represents number of affected citations on page):

The reference to CDFG 2000 on page 4.4-21 (1) is changed to CDFG 2000a.

References to CDFG 2005b on pages 4.4-42 (1) and 4.4-44 (2) are changed to CDFG 2000b.

References to CDFG 2005a on pages 4.4-4 (2), 4.4-16 (1), and 4.4-24 (1) are changed to CDFG 2005.

References to SFPUC 2008 on page 4.4-100 (2) are deleted.

The reference to SFPUC 2008 on page 4.4-81 (1) is changed to SFPUC unpublished data.

The following references listed on EIR pages 4.4-118, 4.4-119, and 4.4-121 are revised as follows:

California Department of Fish and Game (CDFG). 2000a. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities. (Revision of 1983 Guidelines.) Sacramento, CA.

California Department of Fish and Game (CDFG). 2000b. California Wildlife Habitat Relationships System's Life History Account for Foothill Yellow-legged Frog. Updated January, 2000. Available: http://nrm.dfg.ca.gov/taxaquery/SpeciesDetail.aspx?taxonid=58&STitle=Rana+boylii&PTitle=foothill+yellow-legged+frog.

California Department of Fish and Game (CDFG). 2005~~a~~. Response Letter to the Calaveras Dam Replacement Project Draft Environmental Impact Report Notice of Preparation. Sent by Robert W. Floerke, Regional Manager, Central Coast Region. November 22, 2005.

~~California Department of Fish and Game (CDFG). 2005b. California Interagency Wildlife Task Group's CWHR version 8.1 personal computer program. Sacramento, CA.~~

EDAW & Turnstone Joint Venture (ETJV). 2006b. Final Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission. ~~July~~ August 2006.

EDAW & Turnstone Joint Venture (ETJV). 2008. ~~Draft~~ Oak Inventory for the Calaveras Dam Replacement Project, Alameda And Santa Clara Counties, California. Prepared by May and Associates for ETJV on behalf of San Francisco Public Utilities Commission. ~~April~~ November 2008.

San Francisco Public Utilities Commission (SFPUC). 2007. Final Alameda Creek Little Yosemite to Diversion Dam 2006 Wetted Channel Monitoring. ~~Draft Technical Memorandum No. 2-07-009.~~ ~~April~~ May 2007.

San Francisco Public Utilities Commission (SFPUC). 2008. ~~Internal Draft~~ Technical Memorandum: Alameda Creek Little Yosemite to Diversion Dam Wetted Channel Monitoring.

Section 4.5, Fisheries and Aquatic Habitat

In-text citations for the URS and HDR 2009 source listed in the references section on EIR page 4.5-86 are revised as follows:

References to URS and HDR 2009 on pages 4.5-21 and 4.5-42 are changed to URS and HDR 2010.

The following reference listed on EIR page 4.5-86 is revised as follows:

URS and HDR, 20~~09~~10. ~~*Draft*~~ *Technical Memorandum: Assessment of Fish Upstream Migration at Natural Barriers in the Upper Alameda Creek Sub-Watershed.* Prepared for San Francisco Public Utilities Commission. ~~July~~ January 20~~09~~10.

Section 4.6, Hydrology

In-text citations for the following sources listed in the references section on EIR pages 4.6-107 through 4.6-109 are revised as follows:

Both references to California Interagency Watershed Map of 1999 on pages 4.6-6 are deleted.

References to ETJV 2007 on pages 4.6-8, 4.6-12, and 4.6-19 are changed to ETJV 2008.

The reference to URS 2005a on page 4.6-53 is changed to URS 2005.

The reference to URS 2005b on page 4.6-30 is changed to URS 2005.

References to URS 2007 on pages 4.6-100 and 4.6-101 are changed to URS 2010.

The following references listed on EIR pages 4.6-107 through 4.6-109 are revised as follows:

~~California Interagency Watershed Map of 1999. Updated May 2004. Calwater 2.2.1 (“calw221”; GIS on ArcInfo platform).~~

EDAW & Turnstone Joint Venture (ETJV). 200~~7~~8. Calaveras Dam Replacement Project ~~Draft~~ Fisheries Technical Report 2008. Prepared by Hagar Environmental Science and Thomas R. Payne and Associates for EDAW & Turnstone Joint Venture and SFPUC ~~for ETJV~~. ~~January~~ August 200~~7~~8.

~~San Francisco Public Utilities Commission (SFPUC). 2006. “Unimpaired Flow Estimates for HH/LSM System, East Bay Locales.” September 2006. Prepared by Daniel Steiner.~~

~~URS Corporation (URS). 2005a. Calaveras Dam Replacement Project, Draft Conceptual Engineering Report. Prepared for the San Francisco Public Utilities Commission. April 25, 2005.~~

URS Corporation (URS). 2005~~b~~. Calaveras Dam Replacement Project, FINAL Conceptual Engineering Report, Dam and Appurtenant Structures. Prepared for the San Francisco Public Utilities Commission. October 31, 2005.

URS Corporation (URS). 20~~07~~10. ~~Draft~~ Final Technical Memorandum. Dam Break Analysis (Task C12) Calaveras Dam Replacement Project. Prepared for the San Francisco Public Utilities Commission. ~~May 2007~~ June 2010.

VOLUME 2

Section 4.7, Water Quality

In-text citations for the following source listed in the references section on EIR page 4.7-78 is revised as follows (number in parentheses represents number of affected citations on page):

References to URS 2009 on pages 4.7-8 (1) and 4.7-45 (3) are changed to URS 2010.

The following reference listed on EIR pages 4.7-78 is revised as follows:

URS Corporation (URS). 20~~09~~10. Draft Naturally Occurring Asbestos (NOA) and Metals Evaluation Report - Calaveras Dam Replacement Project. Prepared for the San Francisco Public Utilities Commission. ~~January 6, 2009~~ January 8, 2010.

Section 4.8, Geology, Soils, and Seismicity

In-text citations for the following sources listed in the references section on EIR page 4.8-37 are revised as follows:

The reference to URS 2007a on page 4.8-24 is changed to URS 2008c.

References to URS 2007b on pages 4.8-26 and 4.8-31 are changed to URS 2007.

The following references listed on EIR pages 4.8-37 are revised as follows:

URS Corporation. 2006b. *Revised Draft Right Abutment Landslide Treatment, Task C4*, Calaveras Dam Replacement Project, Agreement No. CS-716. December 6, 2006.

~~URS Corporation. 2007a. *Geotechnical Interpretive Report (Task B.10)*, Calaveras Dam Replacement Project, Project No. CUW 37401 May 29, 2007.~~

URS Corporation. 2007~~b~~. *Embankment Seismic Deformation (Task C2), Calaveras Dam Replacement, Project No. CUW 37401*. July 6, 2007.

URS Corporation. 2008c. *Final Geotechnical Interpretive Report (Task B.10)*, Calaveras Dam Replacement Project, Project No. CUW 37401. August 15.

Section 4.9, Hazards and Hazardous Materials

In-text citations for the following sources listed in the references section on EIR page 4.9-31 are revised as follows:

> The reference to Green Lights Recycling 2007 on page 4.9-5 is changed to Green Lights Recycling 2009.
>
> The reference to URS 2007a on page 4.9-16 is changed to URS 2008.
>
> The reference to URS 2007b on page 4.9-21 is changed to URS 2007.
>
> References to URS 2009a on pages 4.9-3, 4.9-4, 4.9-14, and 4.9-15 are changed to URS 2010.
>
> The reference to URS 2009b on page 4.9-24 is changed to URS 2009.

The following references listed on EIR pages 4.9-31 are revised as follows:

> Green Lights Recycling. 2009. Ballasts Facts. Website: http://www.greenlightsrecycling.com/ Ballast%20Facts.htm. Accessed September 2, 2009.
>
> URS Corporation (URS). 2007. Draft *Response to SFPUC Comments Calaveras Test Site ERRG Study*. June 27, 2007.
>
> URS Corporation (URS). ~~2007a~~2008. *~~Draft~~ Final Geotechnical Interpretive Report (Task B.10), Calaveras Dam Replacement Project*. ~~May 29, 2007~~ August 15, 2008.
>
> ~~URS Corporation (URS). 2007b. Draft *Response to SFPUC Comments Calaveras Test Site ERRG Study*. June 27, 2007.~~
>
> ~~URS Corporation (URS). 2009a. *Revision 1 – Naturally Occurring Asbestos (NOA) and Metals Evaluation Report, Calaveras Dam Replacement Project*. April 3, 2009.~~
>
> URS Corporation (URS). 2009~~b~~. *CUW 37401 – Summary of Worker Protection Measures Related to Naturally Occurring Asbestos (NOA) for the Calaveras Dam Replacement Project (CDRP)*. April 21, 2009.
>
> URS Corporation (URS). 2010. *Draft Revision 2 – Naturally Occurring Asbestos (NOA) and Metals Evaluation Report, Calaveras Dam Replacement Project*. January 8, 2010.

Section 4.14, Noise and Vibration

The in-text citation for the following source listed in the references section on EIR page 4.14-27 is revised as follows:

> The reference to SFPUC 2006 on page 4.14-24 is changed to Forrest, pers. comm., 2006 and Siskind et al. 1980.

The following references listed on EIR pages 4.14-27 are revised as follows:

~~San Francisco Public Utilities Commission (SFPUC). 2006. Request for Information Responses C15 and C16, in Blasting Noise Followup, November 18, 2006.~~

Siskind, David E., Stachura, Virgil J., Stagg, Mark S., and Kopp, John W. 1980. Structure Response and Damage Produced by Airblast from Surface Mining. RI 8485, Twin Cities Research Center, Bureau of Mines, International Society of Explosives Engineers.

Forrest, Michael. 2006. URS Corporation, Bureau of Environmental Management. E-mail to Barbara Sahm regarding blasting techniques and noise. November 14, 2006.

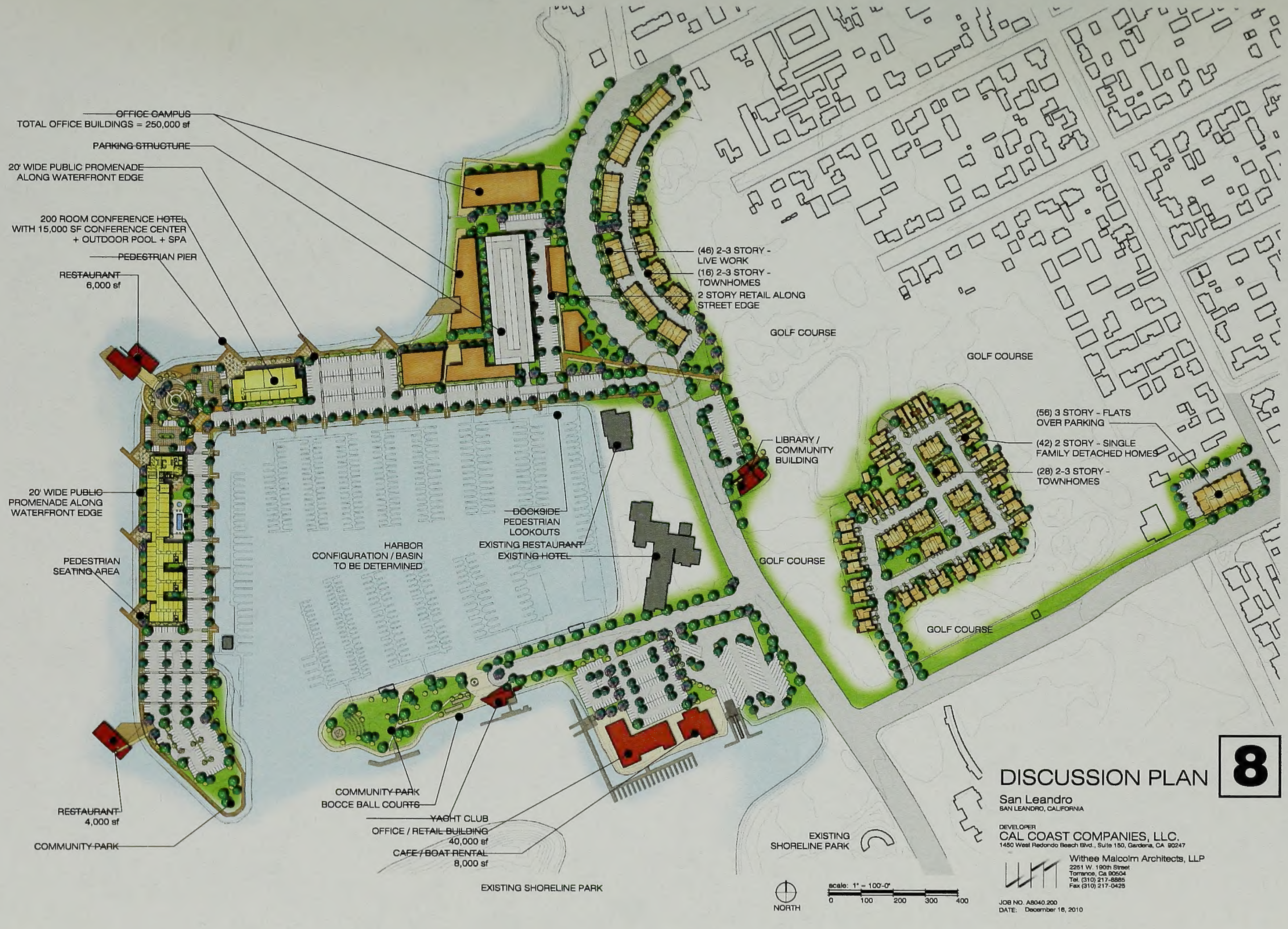
Chapter 5, Mitigation Measures Proposed to Minimize Potentially Significant Adverse Impacts of the Project

The following references listed on EIR pages 5-44 are revised as follows:

California Burrowing Owl Consortium (Burrowing Owl Consortium). 2009. 1993 Survey Protocol and Mitigation Guidelines accessed in 2009, http://222.ucsc.edu/scpbrg/survey.htm. Accessed on June 23, 2009.

EDAW & Turnstone Joint Venture (ETJV). 2006. Final Delineation of Waters of the United States, Calaveras Dam Replacement Project, Alameda and Santa Clara Counties, California. Prepared by May and Associates for USACE on behalf of San Francisco Public Utilities Commission. ~~July~~ August 2006.

U.S. Fish and Wildlife Service (USFWS). 2007. Authorizations under the Bald and Golden Eagle Protection Act for Take of Eagles. Proposed Rule. Federal Register 72:31141–31155.


OFFICE CAMPUS
TOTAL OFFICE BUILDINGS = 250,000 sf
PARKING STRUCTURE
20' WIDE PUBLIC PROMENADE ALONG WATERFRONT EDGE
200 ROOM CONFERENCE HOTEL WITH 15,000 SF CONFERENCE CENTER + OUTDOOR POOL + SPA
PEDESTRIAN PIER
RESTAURANT 6,000 sf
20' WIDE PUBLIC PROMENADE ALONG WATERFRONT EDGE
PEDESTRIAN SEATING AREA
RESTAURANT 4,000 sf
COMMUNITY PARK
HARBOR CONFIGURATION / BASIN TO BE DETERMINED
DOCKSIDE PEDESTRIAN LOOKOUTS
EXISTING RESTAURANT
EXISTING HOTEL
COMMUNITY PARK
BOCCE BALL COURTS
YACHT CLUB
OFFICE / RETAIL BUILDING 40,000 sf
CAFE / BOAT RENTAL 8,000 sf
EXISTING SHORELINE PARK
EXISTING SHORELINE PARK
(46) 2-3 STORY - LIVE WORK
(16) 2-3 STORY - TOWNHOMES
2 STORY RETAIL ALONG STREET EDGE
GOLF COURSE
GOLF COURSE
LIBRARY / COMMUNITY BUILDING
GOLF COURSE
GOLF COURSE
(56) 3 STORY - FLATS OVER PARKING
(42) 2 STORY - SINGLE FAMILY DETACHED HOMES
(28) 2-3 STORY - TOWNHOMES
NORTH
scale: 1" = 100'-0"
0
100
200
300
400

DISCUSSION PLAN

8

San Leandro
SAN LEANDRO, CALIFORNIA

DEVELOPER
CAL COAST COMPANIES, LLC.
1450 West Redondo Beach Blvd., Suite 150, Gardena, CA 90247

Withee Malcolm Architects, LLP
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JOB NO. A8040.200
DATE: December 16, 2010